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THE FUTURE OF INTERACTIVE ENTERTAINMENT

THE EDGE AWARDS
REVEALED: THE WINNERS OF THE YEAR

LITTLE NIGHTMARES

WAKE IN FRIGHT:
INSIDE THE WEIRD INDIE HORROR OF TARSIER STUDIOS

PLUS
JEFF MINTER
VAMPYR
OCULUS TOUCH
JASON RUBIN

#302
FEBRUARY 2017

REVIEWED
THE LAST GUARDIAN
FINAL FANTASY XV
DEAD RISING 4
SUPER MARIO RUN
LET IT DIE
STEEP



Seeking some games for the end of the world

This year may be a testing one, and it's tempting to stew over everything we don't want to see come to pass, but let's be positive and focus instead on what we'd *like* to see emerge throughout videogames in 2017.

First, there's the small matter of an entirely new platform from Nintendo. With Sony so dominant in today's landscape, it makes sense that Switch has been designed as a console that doesn't attempt to battle PS4 head on, preferring to fish in the handheld waters where Nintendo has been so successful since the introduction of the unassuming Game Boy nearly 30 years ago. We want to see the portable aspect work harmoniously with the hardware's function under the TV, we want a mind-bending new *Mario* title, and we want *The Legend Of Zelda: Breath Of The Wild* to rekindle the spirit of *Ocarina Of Time*. We want, in other words, more reasons to sit down in front of Nintendo games the way we used to.

We want to see more developers tackling challenging themes, following the likes of *Battlefield 1*, *Firewatch* and *Mafia III* last year. We want more risk-taking in VR game design, but at the same time PSVR, Rift and Vive games whose appeal isn't exhausted within a handful of playthroughs. We want more games in the vein of *Titanfall 2*, *Dishonored 2* and *The Last Guardian*, bold enough to play with concepts and mechanics that they aren't afraid of discarding later in order to make way for more.

We want *Horizon Zero Dawn*, *Prey* and *Resident Evil 7: Biohazard* to live up to their demos, and for *The Lost Legacy* to complement *Uncharted 4* the way *Left Behind* did *The Last Of Us*. We want *Days Gone* to see Sony's Bend Studio reach its potential, for *Crackdown 3* to convince us about cloud-based processing for Xbox One games, and for *Scalebound* to back up all of Hideki Kamiya's unapologetic posturing.

For sequels, we want *Destiny 2*, the announcement of another VR *Rez*, and a *Bloodborne* follow-up. Finally, we want more indie titles made with the kind of passion being poured into our cover game, *Little Nightmares*.



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Touch sensitive

Room-scale tracking and motion control arrive for Rift – along with, inevitably, a dose of controversy

They say change never comes easy, so perhaps it's no surprise that the first year of consumer VR has been somewhat rocky. The promise, and appeal, of SteamVR and HTC Vive were rather undermined by the latter's pricetag and the former's preference for quantity over quality – a glance at user reviews on Steam suggests many would prefer it the other way round. Sony may have launched PSVR with one of the biggest and broadest launch lineups in videogame history, but it has since lowered its estimated sales figures for what always felt like VR's most massmarket proposition. Then, a perceived lack of focus on new VR titles at December's PlayStation Experience had many fearing that Sony's expertly engineered headset was destined to go the way of Vita: loved by those who owned it, but undervalued by its maker.

And Oculus? There were manufacturing and shipping delays that meant those who had preordered directly through Oculus were still waiting for their Rift when the headset started pitching up at retail. There was the unpalatable controversy around the personal politics, and open chequebook, of founder Palmer Luckey. The company has had to counter the perception that it's trying to strangle the competition by signing up a host of platform exclusives. Perhaps most troublingly of all, Rift has been left in an awkward middle ground between PSVR's affordability and Vive's lavish, but costly, room-scale VR. Rift may have kicked off the VR revival, and been first to reach store shelves and players' heads, but it has always seemed to be lacking something compared to its competitors.

Well, no longer. The launch of Oculus Touch feels like the launch of Rift proper, giving it a much-needed point of differentiation from the competition, while also making it compatible with a host of games that were previously only playable via Vive's wand controllers or PlayStation Move. More than 50 Touch-enabled games and apps were released day and date with the controller, dwarfing even PSVR's enviable launch lineup. It meant that the company that led the charge



The Touch controllers fit beautifully in the hands, and once you've learned the face-button labelling, you're away. One gripe: that circular design means there's no elegant way of putting the things down

towards consumer VR ended 2016 feeling much closer to the competition, and in some areas even surpassing it.

Those who have spent much time with Rift's competitors will be forgiven for thinking they've seen it all before – or most of it, at least. The Touch setup process will certainly be familiar to Vive owners, with its requirement that you trace the outline of your play space with the controller in hand and the trigger pressed down. There's a similarly playful introduction, too, to Valve's The Lab, with Oculus Touch: First Contact, in which a welcoming Wall-E-style robot looks on as you learn what your new controllers are capable of. Elsewhere, apps such as Medium and Quill are the Tilt Brush equivalents – flexible, playful and quietly remarkable sculpting and painting tools. Then there are the games that launched alongside Vive that can now be played using Rift's motion controllers, such as *Final Approach*, *Job Simulator* and *Fantastic Contraption*. So far, so familiar.

In truth, Touch's real USP – which Oculus rather awkwardly calls 'hand presence' – is somewhat unexplored by most of the launch lineup. Perhaps that's because the gameplay applications of giving a thumbs-up or pointing at something are, in truth, more minor than Oculus had suggested. *VR Sports Challenge*, in theory the *Wii Sports* equivalent of the launch lineup, would work just fine on Vive or Move, apart from the ability to use a pointed index finger to hit buttons on the menu screen. Like much of the Touch launch lineup, it's a fine endorsement of motion controls in VR, but not necessarily of Touch itself.

No doubt that will come in time, but for now even that vaunted hand presence is less intuitive than we'd like. Clench your fist and the action will only be replicated by your virtual hand if you're squeezing the grip button on the side of the controller; you can only point a finger if you're making a fist. Hand gestures are binary – your index finger is either fully extended or clenched to the rest of your fist – which gives the impression, whether correct or not, that tracking is slightly less than one to one. ▶



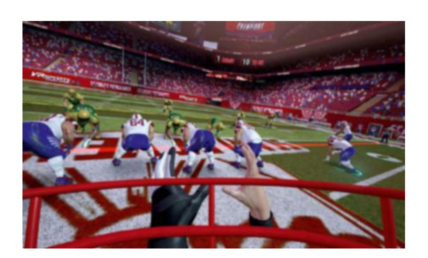
THE CLIMB

Crytek's vertigo-inducing game was something of a disappointment at Rift's launch, but a climbing simulator is naturally improved immeasurably by being able to use your own hands to reach out for handholds, instead of using a standard controller. A note of caution, though: the low of ceiling, or dangly of light fitting, may want to think carefully before clicking the buy button.



BULLET TRAIN

Designed primarily to show off Unreal Engine 4's VR capabilities and since transformed into *Robo Recall*, this five-minute arcade shooter, due this year, is a delight. Teleporting between numerous points, each with various weapons laid conveniently within reach, *Bullet Train*'s high point arrives via some Matrix-style bullet-catching, your subsequent throw automatically targeting the nearest opponent.



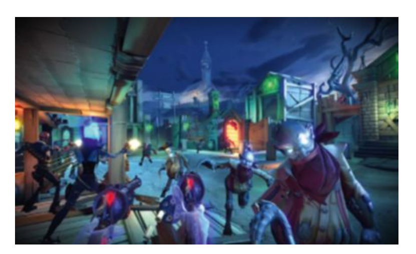
VR SPORTS CHALLENGE

Despite the transatlantic bias to Sanzaru Games' sporting compendium of basketball, gridiron and ice hockey, there's a lot here to like. Basketball is a particular highlight, with teleportation letting you control whichever player's got the ball, so you can both pass and dunk an alley-oop, and you'll even get involved on defence, swatting opponents' shots towards targets for a boost to your high score.



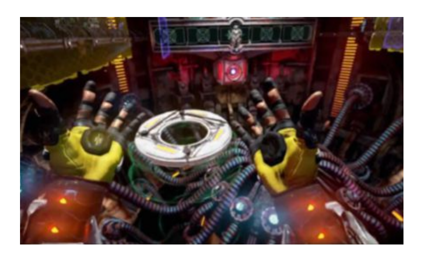
THE UNSPOKEN

Insomniac's sophomore VR release plays on the simple joy of gesture controls. With a chargeable fireball in your dominant hand and a temporary shield in the other, you'll battle human opponents on maps broken up into warp points divided equally between two players. Confident, enormously satisfying stuff, though the multiplayer focus suggests it may face a limited lifespan.



DEAD AND BURIED

Releasing a multiplayer-focused game on a platform with a small userbase is asking for trouble, but Oculus's bundling of *Dead And Buried* with Touch itself will at least maximise its chances of survival. While there's a singleplayer shooting gallery, online is the focus, with Wild West duels, a horde mode and co-op bank robberies. A little predictable, perhaps, but perfectly enjoyable.



RIPCOIL

Oculus may focus its developmental efforts on the less intense end of the comfort spectrum, but *Ripcoil*, free with any purchase on the Oculus Store, is a departure for the company. It's essentially *3D Pong*, but you're standing on the paddle, guiding it left and right by leaning to either side, catching and throwing the frisbee-like projectile. Best played in short sessions, unless you're particularly sturdy.

Room-scale VR can feel like a fudge, too. While Touch comes with a second sensor, the setup process recommends they be placed either side of your monitor, between three and seven feet apart. For us, that meant that the cameras lost sight of us when we were marking out the far corners of our play space, since we were physically occluding the sensors' line of sight to the controller. This isn't a problem with Vive, since sensors are placed diagonally opposite each other, and connect wirelessly; the Rift sensors' USB cables aren't long enough to do this without the use of extenders. Early adopters, having already spent four figures on a powerful PC and almost as much again on a Rift and Touch setup, might consider the £80 investment for a third sensor a relative drop in the ocean.

Where Touch is most successful is in the games Oculus has funded itself – and particularly thirdparty games it's backed in exchange for exclusivity. *Superhot VR* is a revelation – one of the finest VR games we've played to date, certainly, but also one whose effectiveness would be undimmed were it also to have been released for Vive and PSVR. Yet without Oculus's funding, its developers have admitted, it would simply never have existed.

> Where Touch is most successful is in the thirdparty games it's backed in exchange for exclusivity

With *DayZ* developer Dean Hall recently speaking out about how VR developers are on a financial hiding to nothing without support of some kind, whether from a publisher or platform holder, it's clear that the tide of perception needs to turn. While Oculus certainly has a lot to gain from platform exclusives, VR as a whole is never going to get so much as a sniff of massmarket reach without the games to back it up. In the short term, it may be painful to see your choice of one four-figure investment over another devalued by a desirable game being made exclusive to another platform. But it's a necessary growing pain for VR in general. Touch may not be a revolution for VR – yet – but its effect on the quality, diversity and appeal of its host platform is immeasurable. ■



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For the prayers

Sony brings fan service by the bucketload to PlayStation Experience in Anaheim

Those of you who would like to take something positive from 2016 can look on it as the year in which the convention circuit completed its transformation from industry knees-up to fan-focused hype onslaught. Things had been heading this way for a while, admittedly, but 2016 was the year in which sales graphs were consigned to the bin, where trade shows were pretty much abandoned in favour of fan events, and where stage events were made primarily for the people watching at home, rather than those whooping their lungs out in the room itself.

In that sense PlayStation Experience was a fine way to round out the year, even though it showed the good and bad of this new way of doing business. For one, it seems that focusing on fans means you can take liberties you wouldn't dream of taking in front of easily distracted businesspeople or the overzealously critical press. *Uncharted 4*'s standalone DLC, *The Lost Legacy*, opened the show with a stultifyingly overlong demo whose final twist – that the women behind the niqab was conspicuous *Uncharted 4* absentee Chloe Frazer – was obvious from the first minute. Her modest middle-eastern garb tried to conceal what was going on, but there's no mistaking those eyes. Still, the prospect of Frazer buddying up with redeemed *Uncharted 4* antagonist Nadine Ross in a part of the world where women are considered to be second-class citizens is an intriguing one.

As is the prospect of Ellie taking the lead role in *The Last Of Us Part II*, which took the one-more-thing spot at the close of the stage show. Ellie has spent her downtime since the first game learning a mean guitar, developing a singing voice worthy of a John Lewis ad and, it seems, acquiring a quite brutal bloodlust. While the trailer's brevity was passed off as a consequence of the game being early in development, it was also intended to be light on detail and heavy on innuendo, the sort of recipe that sends fan communities into a rabidly speculative lather. The Internet duly obliged. The truth will come in time; what Naughty Dog's bookending of PSX told us immediately is that the studio remains, by a stretch, the jewel in Sony's crown.

> It was largely a reprise of last year's PSX show with the same names filling the same roles

In between it was largely business as usual, a beat-for-beat reprise of last year's PSX show with the same names filling the same roles, albeit with different games. Once again, our condolences go to Shelby Cox, whose role in developer and publisher relations left her stuck with the gig of reeling off all of Sony's contractual obligations. Her bit on *Call Of Duty*'s esports push went over about as well as you'd expect, which is to say it received approximately one tenth of the volume of applause that greeted footage of the *Crash Bandicoot* remake. Cox followed up by turning her attention to Japan with nods to *Resident Evil 7*, *Ace Combat 7* – both PSVR-enabled – and *Street Fighter V*.

Next came Gio Corsi, the thirdparty relations bod who perhaps most closely embodies PS4's central philosophy, For The Players. In PlayStation-branded hockey shirt and beanie, and with Vita in hand, it looked as if Corsi was cosplaying as himself, the dramatic pause before each Vita announcement teetering on the brink of parody. Designed to reassure the fans that Sony hasn't forgotten about Vita, it acted more as a reminder of the extent to which it *has*. Still, Corsi's announcements came thick and fast, and any sartorial or stylistic quibbles melted away as Corsi confirmed *Ys*, *Danganronpa*, two new *Yakuza* games, and, from out of nowhere, a new, online-enabled version of cult 1994 Neo Geo sports game *Windjammers*, plus plenty more besides.



The idea – as evidenced by the above and confirmed by Shuhei Yoshida's bit on the imminent likes of *The Last Guardian* and *Gravity Rush 2*, and Asad Qizilbash's meandering slot encompassing VR, baseball and *Nioh* – was to offer something for everyone, even if that meant just talking about *everything*. Sony can, however, be forgiven for a slight lack of focus – indeed, it should be commended for managing to put together a show at all. In the final months of 2016 it manufactured, distributed and marketed three new pieces of hardware, each aimed at a different part of the marketplace. Is there another company in all of videogames that would even dare to try that, let alone pull it off?

There were problems here: Yoshida almost forgetting to mention that PS4 Pro was about more than 4K displays, and a lack of PSVR titles sparking fears that it's going the way of Vita, when the reality is that VR doesn't demo well on a big stage. However, these are new problems, born of innovation and risk-taking. PSX might have been for the fans, but industry observers left happy in the knowledge that the market leader has no intention of resting on its laurels. ■

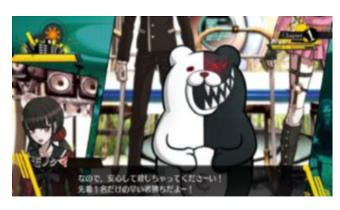


The Lost Legacy **is a spinoff from *Uncharted 4*, rather than DLC for it. Like *The Last Of Us: Left Behind*, you'll be able to buy it regardless of whether you own the base game**











ABOVE CENTRE **Panel discussions gave a taste of the convention circuit, while further building hype for next year's games.** ABOVE **Gio Corsi announced that *Danganronpa V3* was headed to PS4 and the underserved Vita.** RIGHT **For some, an online-enabled *Windjammers* remake was the highlight of the show. Others cheered *Parappa The Rapper*, remastered to mark its 20th anniversary. *Loco Roco* and *Patapon* are inbound, too, and all will be in 4K on PS4 Pro**

FIGHT MONEY

With six figures on the line, the US steps up its SF game



The announcement that Akuma would be joining the cast of *Street Fighter V* got a better reception than it deserved, thanks in no small part to the annual Capcom Cup, the climax of the *Street Fighter* season, being folded into PSX once again. Later that evening, the $230,000 grand prize would be won by an American player, Du 'Nuckledu' Dang. Competitive *Street Fighter* has been overwhelmingly dominated by Japanese players historically; Dang's victory, after a grand-finals battle with another US player, Ricki Ortiz, was heralded as a transfer of power. Yet *SFV* has proven less than popular in the east. Among the top Japanese players it's known as *Street Fighter Duty* – a game they don't want to play, but have to.

Festival of the lost

Indie games have changed. Should the Independent Games Festival change too?

When the annual Independent Games Festival was founded in 1998, indie games felt like gaming's ugly stepchild. They were often literally ugly, for starters, and usually pale imitations of what the mainstream industry was doing or had already done. No one was buying them, no one was selling them. The idea of an indie-game millionaire would have seemed laughable, let alone a billionaire.

The IGF awards, held each year as part of the Game Developers Conference in San Francisco, have been part of moving the form from the fringes to the very centre of the industry, by helping unknown games find funding and secure access to digital distribution platforms on console and PC. Now, in an age where Steam Greenlight and Kickstarter exist, and where Sony and Microsoft knock on the door of indie devs rather than the other way around, the awards feel less relevant than they once were.

Yet they seem to have only been rendered less interesting in recent years thanks to rule changes. Games are selected in their categories via a two-tier process, in which a broad selection of judges looks at every game submitted and makes recommendations, which a team of hand-selected jurors then review before picking the winners. Where previously games could be nominated for the IGF multiple times across different years, now being nominated excludes a game from ever being entered again. This discourages developers from submitting in-progress work, when the finished project has the best chance to not only be nominated, but to win.

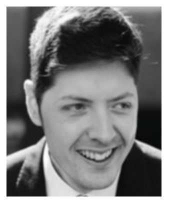
> "Diversity and surprise are an integral part of being interesting, so they should be at the forefront"

The result is a process that regularly selects games that have, in many senses, already won. This was demonstrated most clearly by *Minecraft*'s selection – it won the coveted Seamus McNally Grand Prize, and the publicly voted Audience Award, in 2011 – which caused a lot of debate among judges. "There was a strong and vocal undercurrent of voices that believed it shouldn't even be eligible for the IGF because it had already been massively successful," says **Chris Delay**, whose *Darwinia* won the Grand Prize in 2006. "These judges believed the IGF's primary purpose was to shine a light on new indie gems that had yet to see major press or public attention, and that this and the $20,000 prize would be wasted on *Minecraft*."

Minecraft isn't the only instance of an already successful game being selected by the IGF. In recent years the Grand Prize has primarily been given to games that were already released or at least hotly anticipated at the time they won, including *Her Story*, *Papers, Please*, *Monaco*, and *Fez*. One of the benefits of any award is its ability to lavish praise upon, and direct attention towards, work that might not have otherwise received it, and in doing so encourage the creation of still more work that's inventive beyond the strict demands of commercialism. In this regard, the IGF fails frequently.

"Personally, I think it's important that games are not judged solely on the basis of commercial success or popularity," says **Paul Taylor**, co-creator of turn-based strategy game and 2012 Audience Award winner *Frozen Synapse*. "It's equally important that the lineup isn't dominated by obscure titles that have very few players. Really, the only 'moral imperative' of the IGF is to be continually interesting. Diversity and surprise are an integral part of being interesting, so they should be at the forefront."





FROM TOP **Chris Delay, lead designer and developer at Introversion Software; Paul Taylor, co-creator of *Frozen Synapse***



This year's IGF judging chatter has homed in on games that have been out for months, such as *Inside* and *Hyper Light Drifter*. Can a game of lower profile still break through? There's one outlier from recent years of the award: *Outer Wilds*. Taking place on a planet in its last 20 minutes before being consumed by a nearby sun-going supernova, the game existed publicly only as a prototype and was far from well known when it won the McNally prize in 2015. It's a sign that the awards still have at least some ability to surprise even in the main category.

Delay and Taylor both agree that the IGF is still important for giving games such as *Outer Wilds* visibility. "Indies struggle most with visibility, and that issue is getting more challenging," Taylor says. "In the context of massively increasing numbers of releases every year, any way to stand out is good. An IGF nomination or award can help draw attention to your game."

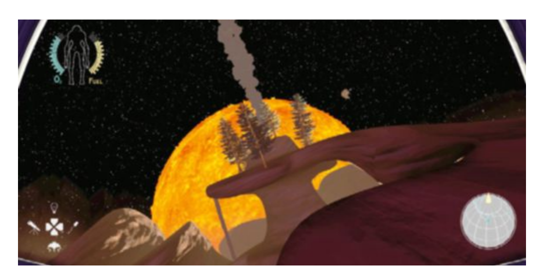
"Just releasing on a platform isn't any guarantee of making a living off it," says **Michael Brough**. As the maker of critically acclaimed but commercially ignored puzzle and strategy games, such as the IGF-nominated *868-Hack* and *Corrypt*, he would know. "It's not getting any easier to get noticed, and IGF is still something people pay attention to."

It's clear that the IGF still has a role to play. But as indie games continue their march towards the mainstream, the industry could benefit from an IGF that spends more time with its fingers reaching farther outward towards the fringes. ■

The IGF awards are now in their 17th year and are handed out each year at a ceremony held at the Moscone Center during the Game Developers Conference



Outer Wilds won the 2015 Grand Prize. The team is now working on a more complete version with Mobius Digital





ABOVE ***Outer Wilds*** **was a rare recent instance of an unknown game winning the IGF's top prize.** RIGHT **PlayDead's** ***Inside*** **has already been a celebrated success but this year's competition seems likely to highlight it further**

PARTIED OUT

SpyParty missed out to Minecraft, but its creator didn't mind



When *Minecraft* won the IGF's Grand Prize in 2011, one of the games it beat was **Chris Hecker**'s *SpyParty*: a smart, in-development asymmetrical multiplayer game about a sniper and a spy. It had limited art at the time, only a small audience, and might have benefited from the extra attention and money. Yet Hecker, who previously worked at Maxis on *Spore*, doesn't mind that *Minecraft* walked away with the gong. "Of course *SpyParty* should have lost to *Minecraft*!" he says. "I mean, it's *Minecraft*! I think the IGF should try to pick the best indie games in each category, and not really consider whether the game needs the help."



Krillbite cites artists such as Robh Ruppel, Mernet Larsen and Naum Gabo when it comes to inspiration, and takes cues from brutalist and constructivist architecture for its environments



PIECE PROCESS

Krillbite drifts from childhood wonder to an adulthood rendered in much darker tones

Norwegian studio Krillbite's latest game, *Mosaic*, is a drastic departure for the company. While its previous title, 2014's *Among The Sleep*, also set out to horrify players, the two games come at the goal from very different angles. *Among The Sleep* portrayed its world from the eyes of a toddler, intensifying its shapes and colour palette to represent childlike wonder. *Mosaic*'s protagonist, meanwhile, is a grown-up, beaten down by the trials of adult life, depicted throughout the game in a solemn visual style.

"We want to show a caricature of reality that is distorted by the protagonist's mental state – lonely, depressed and apathetic," explains artist **Karoline Oppedal Aske**. "This makes the world feel cold, sharp, hard and inhuman. It's full of repetition and patterns that reflect the systematic aspects of our lives. Cold blues, generally desaturated colours and abstracted or simplified surfaces describe a lack of emotional intensity, like the way depression can leave you numb and disinterested in what you usually care about."

This adventure game aims to unsettle the player with its claustrophobic atmosphere and disturbing, relentlessly surreal imagery. *Mosaic*'s setting takes it cues from Krillbite's home town, Hamar, and in fleshing out the game the studio has been inspired by the likes of *Inside*, *The Witness* and *Kentucky Route Zero*. The distinctive look has required a rather different approach for this project.

"For *Among The Sleep*, we wanted the world to be as detailed as possible within the limits of the style," artist **Bjørnar Frøyse** explains. "For *Mosaic*, our approach is more minimalistic and reductive. It's a world devoid of imagination and wonder. The workflow is very different, reflecting both stylistic choices and changes in our core team. *Among The Sleep* had a large amount of hand-painted textures, while *Mosaic* has almost zero textures altogether, relying instead on strong shapes and carefully simplified geometry."

Krillbite plans to release *Mosaic* on PlayStation 4 and PC towards the end of 2017. ■

Soundbytes

Game commentary in snack-sized mouthfuls



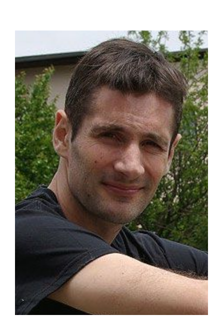
"I do like *Minecraft*… That's something we should have made. Back in the N64 days **we had some designs that were *very* similar."**

Other things Nintendo's **Shigeru Miyamoto** definitely thought of first: Star Wars, Netflix, and the McRib



"What happened to Kojima last year was a tragedy, but he never complained. **He just sat in an isolated room for months,** looked inside himself and focused on his art."

Careful, **Geoff Keighley**: focus on your art for too long and you'll go blind



"There is no money in it. I don't mean 'money to go buy a Ferrari'. I mean 'money to make payroll'… Developers made these deals because it is the only way their games could come out."

DayZ creator **Dean Hall** sketches out an apocalyptic landscape for VR development



"We need to test harder whether we can take a young 18- or 19-year-old out of their PlayStation bedroom and **put them into a Reaper cabin."**

Handy at *COD*? RAF air marshal **Greg Bagwell** wants you flying drones over Syria

ARCADE WATCH

Keeping an eye on the coin-op gaming scene



Game *The Walking Dead*
Manufacturer Play Mechanix

While Play Mechanix's *The Walking Dead* lightgun game distinguishes itself from Sega's *House Of The Dead* series in plenty of ways, the most noticeable is a pair of hulking, mounted crossbow controllers. The units sport a chunky stock and trigger at the rear, and a robust – though easy-to-use – double-sided lever for reloading. While bolts constitute your basic ammo, the game also arms you with hatchets, knives, hammers, explosive and incendiary projectiles, and even a nailgun. As should always be the case, zombies only expire if you land a headshot, which makes Play Mechanix's introduction of bullet-time sections particularly helpful. In some sequences you might need to rescue survivors, with a few seconds to neutralise the approaching undead threat without harming the people in danger. In another section, you must quickly target explosive gas canisters tossed into a crowd of zombies by an ally in order to clear the way.

The game runs on a 1080p display at 60fps, and even makes use of HDR effects, while a dynamic ambient lighting system ups the atmosphere inside the sitdown cabinet. It'll be shuffling its way into arcades soon.

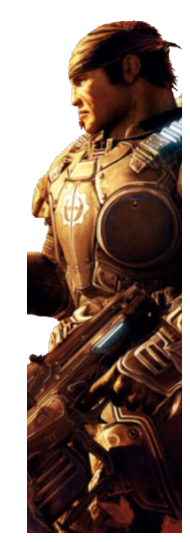


My Favourite Game
Stuart Goldsmith

The standup comedian on playing Mario 64 in Japanese, beating kids at Halo 3, and the joy of Gears' Horde mode

Stuart Goldsmith is a standup comedian and street performer who also hosts the popular The Comedian's Comedian podcast. Here, he takes a break from preparing for his new tour to discuss another of his passions.

COM MAN
Goldsmith is currently preparing to tour his most recent show, Compared To What, which examines how life has changed since he became a father. The tour kicks off on February 3 in Southend and ends with five London dates in May and June. Find details at bit.ly/goldsmithtour. In his weekly podcast, The Comedian's Comedian, Goldsmith interviews other comics about their inspirations and creative processes. Find the latest episodes at bit.ly/comcompodcast



Do you find much comedic inspiration from playing games?
I actually wrote some material for the last show I did [Compared To What], which I'm touring, which was about *Clash Of Clans*. I love strategy games, and I thought there was a funny element to be found in the fact that because I spend so much time playing them, I don't get anything done in real life. Which is not much of a strategy. I only got into *Clash Of Clans* because my ten-year-old godson had got into it, so because I had him in mind I joined it with the username UncleStu, and then I felt more and more like some kind of awful predator that was trying to get kids to join his clan.

I thought they were both funny ideas, but they fell by the wayside because, while *Clash Of Clans* might be hugely popular among gamers – or at least phone gamers – there still aren't that many of those in a room full of average people. There was too much establishing the territory to make it universally funny.

How often are you able to make games work in that sort of context?
There are one or two bits of standup that I've ever done about gaming. One was a long time ago, when *Halo 3* was just about to come out, and was about me and my brother and a random kid in the Science Museum in London, playing what was then a really amazing setup – there were three monitors and we were all playing it against each other in the same room. The child starts annihilating my brother and I, and then at the end, just before he's about to get his 30th kill and win the match, his mum turns up and takes him away. That was broad enough that everyone could visualise it.

When did you first play videogames?
I had a ZX Spectrum 48K. That carbon-dates me. Even before that I played the *Lord Of The Rings* text adventure on the Amstrad, but I must have been about nine and I couldn't get past walking around and around in a circle in a forest. But I remember playing *Hungry Horace*, *Jack The Nipper II*, and I remember mapping games – getting A4 sheets of paper, taping them together, and drawing out the world. Innocent times. I also remember buying *Repton* for my best mate, Noel, and then secretly taping it before I gave it to him. I felt terribly guilty.

> "I remember buying Repton for my best mate and then secretly taping it before I gave it to him"

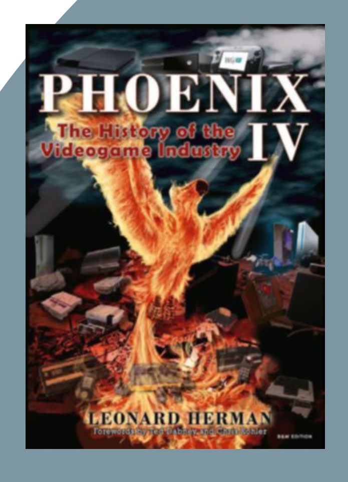
Was that the point at which you fell in love with games?
Those were the very early games, but I can think of two or three iconic moments where I thought, 'Woah, this is another world.' The first is when you first see the T Rex in *Tomb Raider* – it was a joint moment of, 'Oh my god, it's a T Rex,' and then at the same time, 'Oh my god, this is possible now.' The second was when the dogs first jumped through the window in *Resident Evil*. I was playing it with three mates and we all shat ourselves.

Were games always a social thing?
When my mates came round when we were teenagers, we'd play *Command & Conquer: Red Alert*, with two TVs back to back. Being able to play a game together, each on our own screen where you couldn't see the opponent's hand, as it were – that was really exciting. Later, I also had a friend who worked in QA at Codemasters in Leamington Spa, and he lived with another of my friends. He would be playing *Micro Machines V3* for nine hours a day, then he'd come back and play it with us. He also brought back a blue Japanese N64 before it had been released in the UK and we played *Mario 64* in Japanese. It's surprisingly difficult to understand all of the cartoony instructions with one or two key words of English.

How about your favourite game?
Because I now have a child, I play fewer things than I did before. But for me the pinnacle was playing co-op Horde mode in *Gears Of War 2*. I used to use computer games a lot to hang out with my brother – he's in the Midlands; I was in London at the time – but, two or three nights out of seven, we could put on a headset and then also have my housemate or another friend elsewhere play. It stimulated all of those memories of playing as a child with my brother. We had the time of our lives. ■



"There was one Edinburgh where I thought, I'll take *Civ V* with me and it will keep me out of the pub," Goldsmith says. "I ended up staying up longer than I would've if I'd gone out"

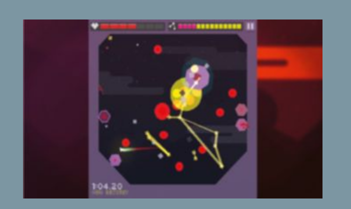


BOOK
Phoenix IV
bit.ly/phoenixiv
Though many outside of the US were unaware of it at the time, America's videogame crash of 1983 ripped an industry to pieces, leaving a trail of high-profile casualties in its wake. The rebuilding process in the following years was the focus of Leonard Herman's Phoenix in 1994, and the book retained its subtitle, The Fall & Rise Of Videogames, for two subsequent editions. With the arrival of its fourth iteration, however, we get a subtitle that encapsulates the book's mission statement today: The History Of The Videogame Industry. At 828 pages, it is the most far-reaching of all game-history studies (for arcade and console games, at least – it avoids computer games), Herman's hardened dedication to his mission baked into every one of its 43 chapters, stretching from 1951 to the modern era.



VIDEO
Atari 2600 Minecraft emulator
bit.ly/ataricraft
Minecraft-focused YouTuber SethBling has built an Atari 2600 emulator in Mojang's apparently limitlessly flexible sandbox. While a short video covers the basics, this version goes into more detail. The creation reproduces the works of the 6502 CPU using mud, stone and wool blocks, while a vast expanse of dirt blocks represent the console's 128 bytes of addressable memory. Each game ROM is stored as a vast rectangular bank of blocks at one end of the RAM plain, while an elongated display sits at the other. The whole setup is capable of rendering at a blistering 15 frames per hour.

WEB GAME
Spingun
bit.ly/spingun
Inspired by the likes of *Downwell*, *Luftrausers* and *Asteroids*, *Spingun* is a frantic, brutal two-button shooter for iOS and PC. Your two inputs control your ship's left and right thrusters, while holding both buttons down shuts down the afterburner and fires whatever projectiles you happen to have equipped at the time. The setup means you can't boost in a straight line, causing a panicked, chaotic ballet of projectiles as you try to manoeuvre yourself as enemies close in. Some simply float directly towards you, others patiently wait for the opportunity to rush in, while still more fill the tiny arena with projectiles. Weapon powerups include laser beams, homing missiles and proximity-triggered explosives, and quick kills earn you precious health packs. But death in this fast-paced shooter is inevitable.



THIS MONTH ON EDGE

When we weren't doing everything else, we were thinking about stuff like this

PHONE
Sony Xperia XZ
bit.ly/xzremote
Sony may still be terrible at naming phones (and their components: this device's case is made of a metal compound the company has dubbed Alkaleido), but on the evidence of its Xperia XZ, it's at least getting better at making them. Indeed, there's a tremendous amount here to like – USB-C connectivity, for instance, and an adaptive charging system that Sony claims doubles battery lifespan. But the real draw is PS4 Remote Play, which sings on the phone's 5.2-inch display, especially when streaming at 1080p from a PS4 Pro. Also worth a look is the Game Control Mount, which clips your phone to a DualShock 4, and has the added bonus of not having a descriptive, not-entirely-terrible name.



continue

Old Bones
Xbox 360 compatibility continues to liven up this gen's most boring console

Trial 911
Porsche's 17-year exclusivity deal with EA comes to a conclusion

Hard knocks
Rainbow Six: Siege's PVE Bartlett University map gets a PVP revamp

Face invaders
Classic arcade games make Facebook Messenger marginally more palatable

quit

X pains
Not even the presence of *Skate 3* can ease the pain of Xbox One's ghastly UI

Sensored
With Touch's arrival, our VR rig's USB-port quota is officially maxed out

Virtual short
Yep, we're ready to get our teeth into some more substantial VR treats now

Super Mario stop
Super Mario Run needs to be online to counter piracy, apparently

TWEETS

Hey! So, sometimes game devs will tweet that the company they work for is hiring. This is not a request for you to DM them your game pitch.
Emily Garrison @emilybuckshot
Narrative designer, *Batman: The Telltale Series*, *The Walking Dead: Michonne*

I'm so old that I remember when WASD was IJKM.
Ben Collins-Sussman @sussman
Engineering site lead, Google Chicago

How can I explain to a 4 year old why all the men in *FFXV* look like Asian glam rockers, drive American cars and fight giant worms for love?
Alex Hutchinson @BangBangClick
Creative director, Ubisoft Montreal



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DISPATCHES FEBRUARY



Issue 301

Dialogue

Send your views, using 'Dialogue' as the subject line, to edge@futurenet.com. Our letter of the month wins a year's subscription to PlayStation Plus, courtesy of Sony Interactive Entertainment



PlayStation Plus

Virtual reality

There has been a lot of talk recently about the 'simulation hypothesis': the suggestion that we live inside a computer simulation. The hypothesis itself isn't news: The Matrix was a big hit in 1999, and Descartes' Meditations was all the rage 400 years ago. But now that it's got the attention of some scientists, and of entrepreneurs such as Elon Musk, it gets to feature prominently in newspaper coverage.

There are different arguments for the hypothesis, but one goes something like this: videogames are advancing so rapidly they will soon be indistinguishable from reality; if this will happen soon, then it might have happened already; we might be living in a simulation. I'll leave it to a philosophy class to pick this apart in detail, but I'd like to point out that it just isn't true that games will soon be indistinguishable from reality.

"Are games too grown up now to indulge the simple fantasy of feats of heroic derring-do?"

There's obviously been incredible progress in graphical fidelity, sound and (perhaps to a lesser extent) animation, but I think this can distract from much slower progress in other aspects of videogame design.

Take AI. When the original *Thief* came out back in 1998 it was lauded for the huge step forward it made in AI behaviour. Guards chatted, they had patrol routes, they could be disturbed and then looked for the source of the disturbance, and raised alarms. But they also chatted through stabbings, burglaries and assaults – sometimes on themselves. They would run away into dead ends or swing limply at Garrett if forced into a fight. When the *Thief* reboot came out in 2014 it was panned for just about everything, but near the top of the list was its terrible AI. Even after 16 years the basic NPC behaviours hadn't changed, and many of the issues that plagued the original also plagued the reboot.

Aside from slow progress in some aspects of videogame design, there is also the overarching issue of bugs. We know how it goes from Bethesda's games: the bigger, more coherent and more immersive the world, the more immersion-breaking bugs it has. Do you want to pick up that book, just like you would in real life? Well, give it a go, but you might find it less tricky to pick up that oversized Gatling gun. Does that NPC enjoying cooking and long walks in the countryside? Yes, but they also enjoy long sessions of clipping through walls and ceilings.

I have no idea whether these sorts of issues are fundamental enough to make it impossible – not just now, but at any point in the future – to create a videogame that is truly indistinguishable from reality. But I think it's fairly obvious that we aren't going to create one any time soon.
Leo Tarasov

That's probably for the best. After all, do we really want to live in a world that proves Elon Musk right? Terrifying stuff.

Gotta Switch 'em all

Recently, we have been getting no end of Nintendo Switch information and rumours, mainly based on its games. *Mario* will come before *Zelda*, it seems, and there's a *Lego City Undercover* remaster on the way. But amidst all this, there was one game that stood out and may just be more important than any of those games: *Pokémon Stars*.

Yes, it's just rumours. But the point here is that it's come from Eurogamer, the same place that first rumoured the Switch design. That pretty much turned out to be true. Will they be correct on this one? Hopefully.

Why? I think most people will instantly know the answer to that, but if you aren't crazy for Nintendo, you might not. In July, we got a mobile app you may have heard of, *Pokémon Go*, that took the world by storm. Then we got one of the best and most highly rated *Pokémon* games ever, *Sun* and *Moon*.



www.facebook.com/edgeonline
Discuss gaming topics with fellow **Edge** readers

So the current appeal of *Pokémon* is massive, from both investors and the people like us. Especially considering *Stars* is rumoured to be the 'third version' of *Sun* and *Moon*, if it were to release six months into the Switch's life, it would benefit Nintendo hugely and also encourage the handheld and mobile audience to the new console.

Especially considering the poor sales of Wii U, if Switch were to get off to a good start, it would relieve some of the pressure on Nintendo. And let us not forget that Wii U never actually got a true Pokémon game (let's not start on *Pokkén Tournament* or *Pokémon Rumble U*). If Switch were to get one early on, it could make all the difference.

Providing the rumours are true, Nintendo is on to a winner. Considering the appeal of the series, it's smart thinking: encourage the mobile and *Go* audience to Switch, and there you have it. Sales boosted hugely. Now we just have to wait for the presentation to find out if it is true or not!
James Baldwin

Nintendo rarely seems interested in what we'd consider no-brainers – look how long it took for it to make mobile games. But a Pokémon game on a hybrid home-and-portable game console is surely too irresistible a prospect to ignore. Right?

Hero power

With 2016 having taken so many of my heroes (David Bowie, Prince, Muhammad Ali and, of course, Paul Daniels) and the real world seemingly going to hell in a handcart, I'm looking for heroism in my games. Yet 2016 hasn't really given me anything to get excited about. Look at the games that came out this year: to borrow an immortal line from The Stranglers, whatever happened to all the heroes?

The push for agency, empowering the player to define their avatar's personality through their playstyle, is of course a noble goal. But the consequence is a loss of character overall. Unless Sony gives the *Uncharted* IP to another studio, we have seen the last of Nathan Drake. *Uncharted 4* felt like more than a goodbye to a loveable frontman, or even to a beloved series. Drake and *Uncharted* are a dying breed: character-driven, story-first action romps that drip with likeable personality.

Much as I have enjoyed this year's *Dishonored 2* and *Deus Ex: Mankind Divided*, neither are defined by the personalities of their central characters. They are skill trees in physical form; they have names and faces, yes, but ultimately their personalities are dictated by who the player wants them to be. Neither *Watch Dogs 2* nor *Mafia III* featured protagonists that will grace billboards and game boxes for years to come; they were specific creations for a single story. Both stories were worth telling, and both games I enjoyed. But hardly heroic.

Are videogames too grown up now to indulge the simple fantasy of feats of heroic derring-do? To put it another way: where is the next Nathan Drake going to come from? I think that, these days, we need him and his kind more than ever before.
Adam Dutton

An elevator pitch for you: it's *Uncharted*, right, but with magic instead of guns, and Paul Daniels instead of Nathan Drake. We'll get right on it. In the meantime, hopefully a year's worth of free games via PlayStation Plus will supply the heroism you crave.

Top grossing

After reading Jack Marshall's letter in **E**301, I couldn't help but a feel a pang of regret of my own. While I can't claim to have owned over 200 issues of **Edge**, your publication had been very much a part of my earlier gaming life, back when I was still a Sega fanboy and bought **E**65 with its 'Dural' cover purely for the Dreamcast coverage. I would read it just so I could disagree with your views before reverting to the comfort of other Sega magazines. But as the months went by, the petty fanboyism subsided and **Edge** became a magazine I could disagree with but respect. By the time I started owning every console possible, respect had become reverence – a reverence that still endures today, when monthly publications are increasingly a rarity.

To think, then, that during my uni years, with all of life's possibilities and activities, there wasn't enough room for videogames. Ridiculously, in my first year in halls, I had lugged all my consoles and about five years' worth of **Edge** back issues into my parents' car and my cramped accommodation. By the time I started my second year, they had all gone. Every console and game went to CEX, and I'm ashamed to say those **Edge** back issues were rather unceremoniously tipped into the recycling bin.

But quite miraculously, nearly a decade later, I returned to playing games at the end of my 20s. Naturally, **Edge** was my first port of call to help me catch up on everything. I also jumped at the offer to buy all your digital back issues but was disappointed to see it only went back as far as the end of 2009. I could perhaps track down the rest on eBay but let's face it, I don't have the space for them anywhere.

So imagine my surprise when reading **E**300 on my iPhone there turned out to be a digital copy of **E**1 in its entirety after it. So to cut to the chase, how about digitising the entire **Edge** back catalogue? If you can reproduce one, I can't see the rest being a problem, and you'd certainly have at least one willing customer here. More importantly, once it's bought digitally, it's there forever. That's certainly something the game industry can learn from in preserving their own back catalogue for future generations.
Alan Wen

The **Edge** archive is a complex beast, spanning many operating systems, software packages, storage media, and the sort of incompetence that would get people fired elsewhere, but we'll run it by the men who wear aftershave and see how we go. ■



STEVEN POOLE

Trigger Happy

Shoot first, ask questions later

My co-op partner and I are piloting a spaceship through hostile star systems. It's a pretty good spaceship: it has an engine that lays mines, four guns (one of which has lately become a giant flail), a shield resembling giant shark's teeth, and a massive cannon that shoots out multiple homing missiles. The only problem, really, is that there are just two of us, and in order to switch from operating the top gun to, say, the shields, one of us has to physically move from one end of the ship to another, by means of platforming and ladders. And quite often we don't communicate fast enough and we both rush to the engine, leaving the guns unmanned. Cue hilarious recriminations.

Such are the delights of the excellent *Lovers In A Dangerous Spacetime*, which is such fun that it wasn't until the next day that I asked myself the obvious question. Wait, this takes place in a future of high-tech spacefaring. And our ship doesn't have integrated command and control of all its systems from one place – like any modern-day car driver's seat or airplane cockpit? That, of course, is ridiculous. No more ridiculous, you might say, than the fact that the aim of the game is to restore love to the universe by rescuing adorable space bunnies. But the problem is that, once you start asking awkward questions like these, it becomes difficult to stop.

Why, for instance, does your spacesuit in *No Man's Sky* not even have the battery life of an iPhone, when one would reasonably expect that in this glorious future of faster-than-light interstellar travel, scientists would have figured out pretty decent energy-storage solutions? (Not to mention that, by that time, game designers would have figured out less insanely tedious inventory systems.) Why, in so many games, do 'lasers' still move as lazily travelling bolts, rather than operating at the speed of light? (So you can dodge them, of course. The alternative is to simulate the complications of space battle at relativistic speeds, as is done splendidly in prose by Jack Lynch in his Lost Fleet novels.)



The problem is that, once you start asking awkward questions, it becomes difficult to stop

For that matter, why do aliens in videogames wear clothes? As *Mass Effect: Andromeda*'s art director **Joel MacMillan** said in a recent interview, it's quite possible that aliens would be so alien in culture and mores that they wouldn't wear clothes in any sense we recognise. So the developers originally made them naked aliens. And then they realised that would be a bit weird for the player. "There's a really odd disconnect with trying to associate with an alien that's completely naked in front of you," MacMillan said, almost as though speaking from personal experience. "You're standing there and, 'Hey, I'm in clothes – why aren't you in clothes?'" Well, quite. Still unanswered is the supplementary question: why do aliens in videogames wear clothes that so closely resemble the sci-fi/fantasy armour outfits developed by artists on Earth in the mid-20th century and endlessly recycled in under-imaginative popular media ever since? (High collars, codpieces, kneepads – you know the sort of thing.)

The underlying issue, perhaps, is that, as Arthur C Clarke once declared: "Any sufficiently advanced technology is indistinguishable from magic." And too much magic is bad for speculative fiction, where some laws must still apply for the magic to work against. (This is as true of Harry Potter as it is for Star Wars.) If your future-tech scenario is one where virtually anything is possible, then there will be little opportunity for dramatic or ludic friction.

So we can infer that one way of creating a futuristic scenario in which interestingly dramatic or playful things can happen is to think of a bunch of really cool futuristic things, and then subtract some critical ones. Thus, the crew of the USS Enterprise do not all have personal forcefields that make them immune from violent attack. Thus, too, the crew of *Lovers In A Dangerous Spacetime* do not have networked ship systems. Given what we already know about computers, in any case, it's a safe bet that, even looking ahead as far as you like in the future, they will still periodically crash and fail. And then humans, or naked aliens, will be left to fall back on their own resources of ingenuity and pluck. What games are slowly teaching us is that we will never have a completely failsafe set of tools to insulate us from the buffeting of a hostile universe – which is perhaps, in the age of Brexit and president-elect Trump, a more important lesson than ever.

Steven Poole's Trigger Happy 2.0 is now available from Amazon. Visit him online at www.stevenpoole.net

Illustration **kaeru.com.ar**



NATHAN BROWN

Big Picture Mode

Industry issues given the widescreen treatment

Since becoming a father, I've not really had a hangover. I mean, I've had plenty – the pounding head, the churning stomach, the waves of nauseous regret – but not like I used to, where you just spend a Sunday curled up in the foetal position on the sofa watching five straight hours of the worst channel on the television because the remote is two feet away and you simply can't summon up the will to move. These days a hangover means desperately urging a toddler to finally discover his indoor voice, sadly tidying up Mega Bloks, and trying not to puke when 15 kilos of seemingly infinite energy knee-drops your diaphragm.

Yet I've been thinking a lot about those old hangovers lately, and specifically that apparent physical inability to reach for the remote; to find oneself unable to move for five seconds even when you know that doing so will greatly improve the next five hours. Every evening, as the offspring finally slips into his nightly devil-coma, I survey my bulging pile of shame. I think about playing something in virtual reality; all those apparently excellent games I have on Rift, Vive and PSVR, and have yet to touch. This virtual realm of seemingly infinite possibility offers me experiences I have never had in my 30-plus years of playing videogames. How can you say no to that?

But I will, because it involves plugging things in, finding my headphones, mucking about with cables and straps and headsets that apparently want to eat my glasses (when they said I'd need powerful specs for VR, I assumed they were talking about my graphics card). If I want to play a Vive game it means clearing the study of furniture, setting the whole thing up from scratch and boxing it all back up when I'm done, because I can't leave that mess in place with a two-year-old running around. Rift always seems to need an update, and is the most desperate to gobble my spectacles. PSVR involves the least friction but is still a pain in the arse, and inevitably means I am going to get all OCD-upset about the apparent impossibility of my ever sorting its morass of cables in a remotely elegant way. Seriously, that thing has ruined my living room.



Illustration **kaeru.com.ar**

This is probably the real reason I play so much Destiny: it is quick and easy, and I am slow and lazy

So, faced with this dynamic new medium and its infinite spectrum of etc and so on, I just can't really be bothered with it. And like a 25-year-old with a crippling hangover resigning himself to a Hollyoaks omnibus even though he hasn't watched it in years, I flop back on the sofa, fire up the PS4, and play whatever was last running before I put the console in Rest mode. I try to intellectualise it, to say it is social and relaxing and brilliant, but this is probably the real reason I play so much *Destiny*: it is quick and easy, and I am slow and lazy.

I wonder if I'd have felt like this ten years ago, at least when I wasn't sobbing beneath a duvet watching three hours of Escape To The Country. But VR's somewhat messy implementation feels especially inappropriate at a time when the game industry has worked so hard to minimise the friction between us having the intent to play, and actually playing something. An iPhone game starts up as quickly as I can show it my thumbprint (because a swipe and a four-digit PIN takes too long!) and tap an app icon; PS4 and Xbox One keep games running in standby because stuff the environment and forget the electricity bill – I have 20 minutes to spare before the kid wakes up and fancy a quick bit of Crucible. We build our PCs with SSDs to maximise startup speeds and minimise game load times. When everything else in games is built around convenience – when our phones, consoles and PCs have convinced us we are short on time – is it any wonder that VR feels like too much of a faff?

This is the price we pay for progress, I suppose. VR is a big step forward in one direction that involves a couple of little steps back elsewhere, and that's fine. We should have to work a little harder for the biggest thrills available. We used to sit there looking at static loading screens for ten minutes in order to see the best the Commodore 64 had to offer; we'd travel all the way to the seaside to see *Final Fight*'s gigantic sprites. In that context, how can I possibly feel that five minutes getting set up for VR is too much like hard work? Our devices may have taught us to be lazy, but only a fool – or someone with a really bad hangover – would sit through Bargain Hunt when Breaking Bad is on the other side. So now that the horrors of 2016 are put to bed, I know what my New Year's Resolution is. Make the bloody effort.

Nathan Brown is **Edge***'s deputy editor. While you're up, could you stick the kettle on? And come back with a cup of tea?*

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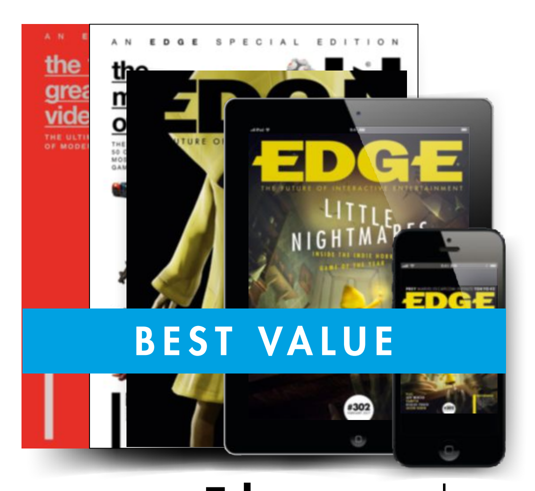


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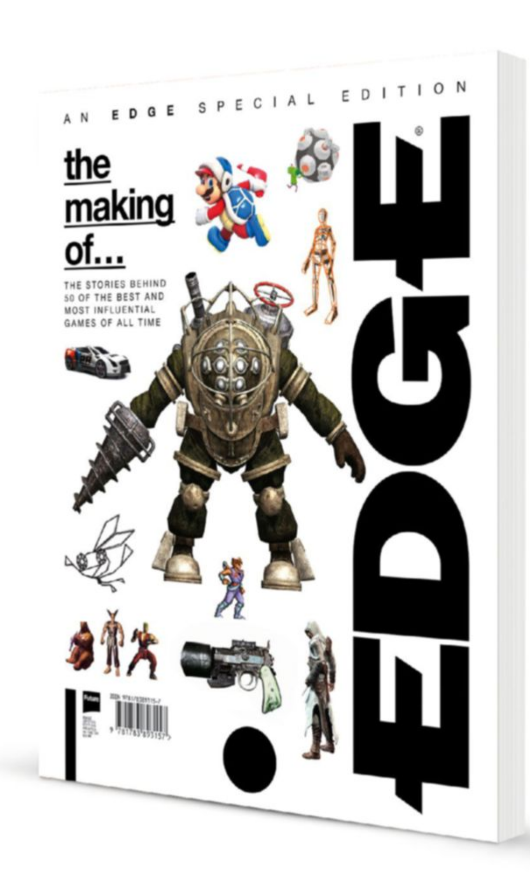
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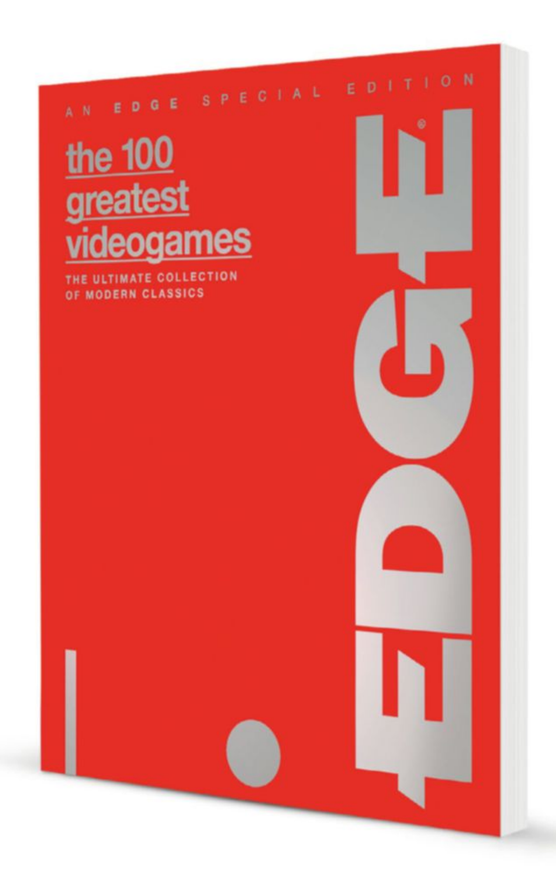
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The 100 Greatest Videogames

This limited-edition volume, presented with a foil-embossed cover, examines the videogames that deserve to be in your collection, from old favourites such as *Tetris* to modern-day masterpieces such as *Metal Gear Solid V*, with full-page artwork showcases throughout.

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#302

H Y P E

THE GAMES IN OUR SIGHTS THIS MONTH



Explore the iPad edition of **Edge** for extra Hype content

Free to play

For all that we praise games that prize player agency, freedom can come at a cost. While being penned in by a stringent designer's hand can be frustrating, too much choice can be crippling. Finding the right blend is no small challenge for developers, who must find a way to balance freedom and direction in such a way that doesn't feels contrived, leave players feeling lost, or break any of the systems on which the game is built.

It's a challenge that Arkane Austin and Dontnod are both tackling head on. In *Prey* (p34), Arkane is embracing player whims to the fullest extent, endeavouring to create a game that says 'yes' to anything you might attempt, or even conceive of. To that end, you can tackle objectives in any way you like; specialise according to your own particular play style; and even kill mission-critical characters if you choose. And all of that is before taking into account the alien abilities you've inherited that let you morph into any object and roll through any gap.

French studio Dontnod is taking a more sombre, but no less daring, approach. In *Vampyr* (p40), the *Life Is Strange* developer has crafted a devious tension between progression and content: you can kill at will and become incredibly powerful, but the characters whose blood you drain won't be able to offer you the missions, storylines or items they would have provided when their hearts were still pumping. You must choose how much of your potential experience to cannibalise in order to become stronger.

Capcom faces a very different problem in assembling the many moving parts of *Marvel Vs Capcom: Infinite* (p44). The complexity of its 3v3 forebears was, it turns out, off-putting to newcomers and wasted on high-level players, who homed in on the handful of characters at the top of the tier list. Here, taking away choice benefits the game overall. Freedom is one thing, but sometimes hard restrictions bring everything into focus.

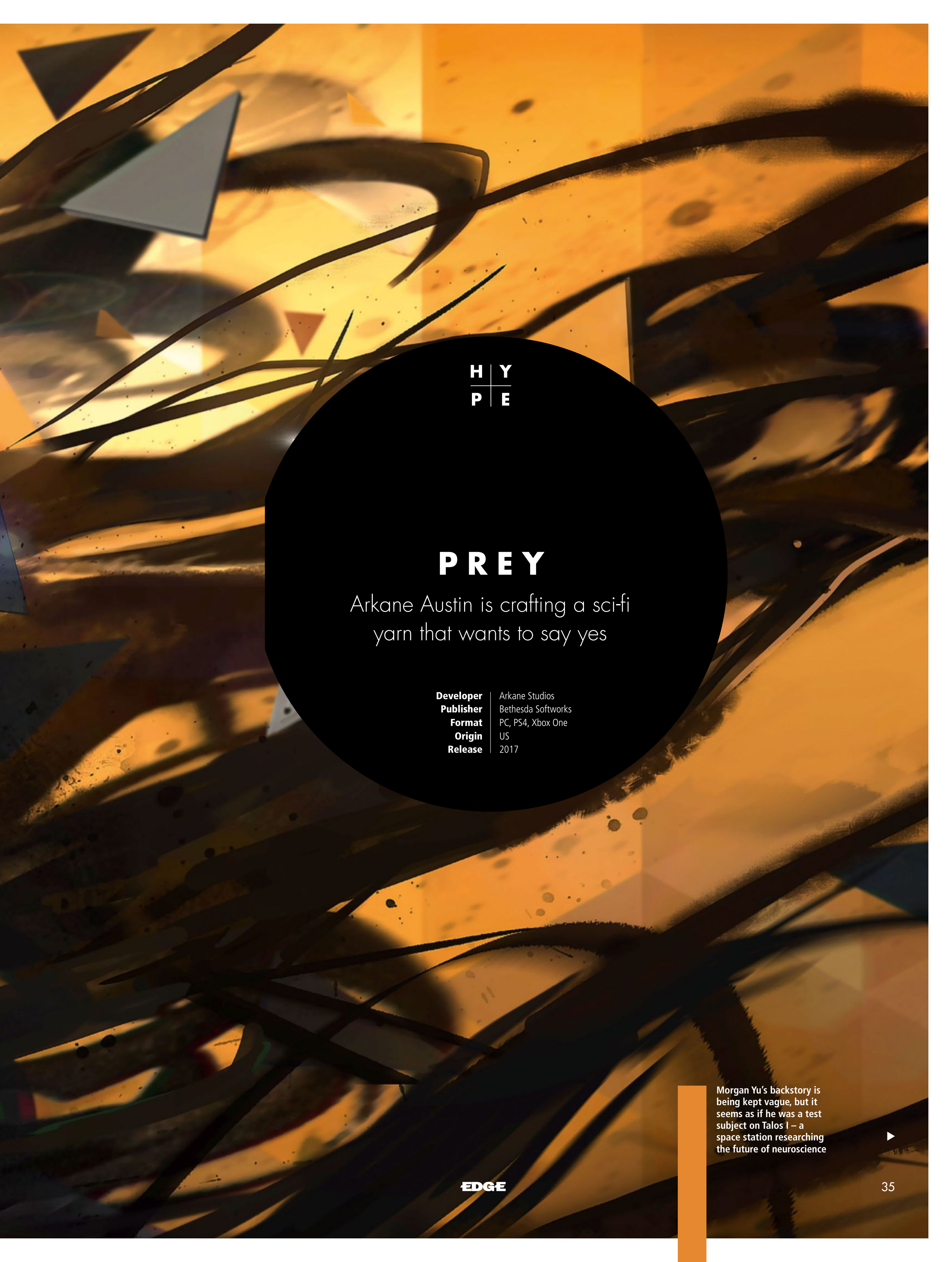
MOST WANTED

Crackdown 3 Xbox One
The Last Guardian's elegant, satisfyingly crumbly architecture and *Battlefield 1*'s razed war fields have put us in the mood for more wanton environment destruction. *Crackdown 3* might be less considered, but the prospect of downing entire skyscrapers remains as enticing as ever.

Tekken 7 PC, PS4, Xbox One
With *Street Fighter V* long uninstalled, we've been looking for a reason to dig our arcade sticks out of the upstairs cupboard. The presence of Akuma is, to lapsed world warriors, an irresistible draw to what looks like being the best, most accessible *Tekken* in years.

Mass Effect: Andromeda
PC, PS4, Xbox One
The Nomad, more expansive planets, busier hubs and even greater flexibility in how you go about completing your mission. The colour palette might be a little on the gaudy side, but still, March, get your skates on, hmm?





PREY

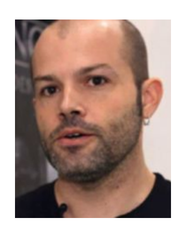
Arkane Austin is crafting a sci-fi yarn that wants to say yes

Developer	Arkane Studios
Publisher	Bethesda Softworks
Format	PC, PS4, Xbox One
Origin	US
Release	2017

Morgan Yu's backstory is being kept vague, but it seems as if he was a test subject on Talos I – a space station researching the future of neuroscience







Ricardo Bare, lead designer for *Prey*



Hanging on the walls of Arkane Austin's studio are reminders of *Prey*'s core design tenets. Styled like motivational posters, each features a game, and details the laudable qualities Arkane intends to learn from it. One, titled 'Say yes to the player', shows *Just Cause 2*'s Rico straddling an airliner. "It's an instinct we try to cultivate, which is an instinct almost any gamer has anyway," **Ricardo Bare**, lead designer on *Prey*, tells us. "When you're playing a game and you hit an obstacle, you're just naturally like, 'I'm gonna try this, I'm gonna try this,' and we try to, as developers, remember that instinct and say yes to it."

Just Cause 2 is a fun, deliberately absurd example of that instinct. But this is a trait common among immersive sims – a term first applied to *Deus Ex*, referring to the desire to create immersion through the simulation of items, NPCs and systems within the world.

> *"We decided up front that any time you run into a character you can kill them"*

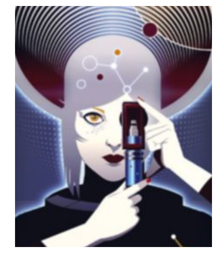
It's a design philosophy that favours consistency over scripting; setting up the core systems and challenges, and letting the spectacle emerge from the player's discovery and subsequent understanding of how everything interacts. Arkane has been saying yes to the player since the studio's inception, with *Arx Fatalis*, and through to *Dishonored 2* and now *Prey*.

During a hands-off presentation by Bare, we're shown the start of a sidequest. *Prey* is set on Talos I, a space station that's been overrun by extraterrestrial lifeforms. Protagonist Morgan Yu is asked by a survivor of the attack to go to the crew quarters and retrieve one of his personal items. Instead, Bare attempts to slip through the security window leading into the survivor's hideout – the kitchen of Talos I's cafeteria – by using an ability, learned from the aliens, that lets Yu mimic the form of any item. He fails his initial attempt, and we move on. But the suggestion is that, had he nailed the execution, it could have worked.

"If I'd managed to get in there, the objective that he gave me would have failed because he doesn't like me any more," Bare says. "But then I could have just done whatever I wanted in there. I could have used his recycler, taken all his stuff, and that would have just bypassed that whole section of the game." Taking Arkane's 'say yes to the player' philosophy to its logical conclusion, could we have killed him? "Absolutely," Bare confirms. "One of the things that we decided up front was, and it's a little bit of a throwback to some of the older games like *Ultima Underworld*, any time you run into a character – a main character who's a survivor that you encounter in the station – you can kill them. We try not to make it easy for you to do that, but it's totally possible."

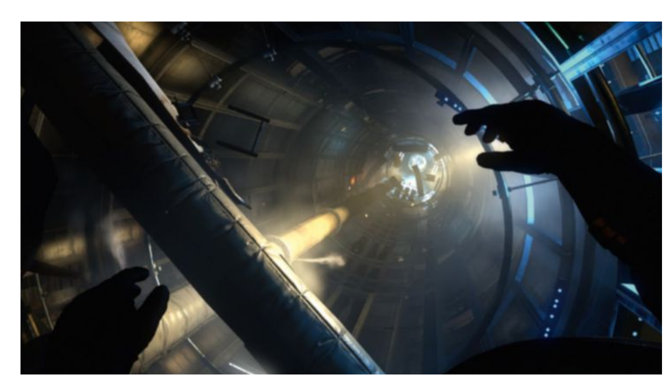
All of Arkane's games try to offer this level of reactivity, but *Prey* isn't just a sci-fi-themed *Dishonored 2*. Where *Dishonored*'s lineage can be traced back to *Thief* and *Deus Ex*, *Prey* exists closer to the RPG end of the immersive-sim spectrum. This is Arkane returning to its roots. "When we started conceiving the kind of game we were going to make next, it was a deliberate choice to go back to something like *Arx Fatalis*," Bare says, referring to Arkane's first, *Ultima*-inspired game. "And of course we're all like super-inspired by games like *System Shock*."

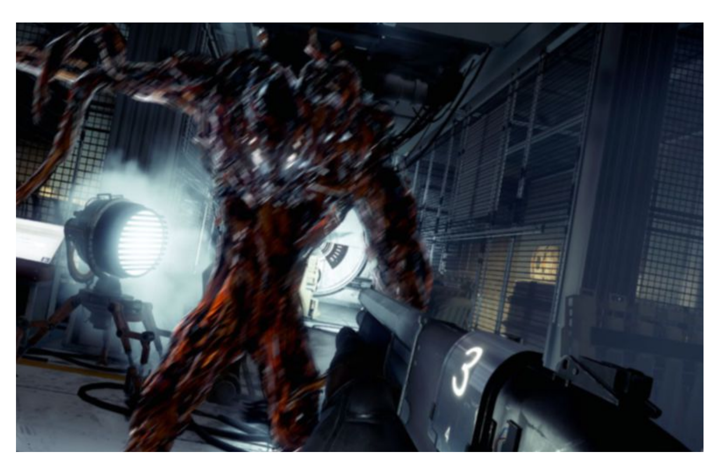
As an RPG, *Prey*'s combat is markedly different to that of *Dishonored*. It's possible to sneak around enemies, but *Prey* isn't a stealth game. The aliens have health bars, and the most dangerous ones won't be killed by a sneak attack – not unless Yu's build is tailored for critical melee damage. In one section of the demo, Bare encounters a Telepath. It's a powerful, floating alien that can mind-control nearby humans. Combat doesn't necessarily mean guns, although a shotgun proves to be useful for the opening of the fight. After a few shots, though, it starts to jam. Talos I's weapons are manufactured cheaply, using fabricators, which makes them prone to degrading quickly. It's just one of the ways *Prey* attempts to synchronise its world with its systems. While guns are unreliable, Yu is able to use the fabricator to craft more. It's a way for you to tailor your playstyle, but



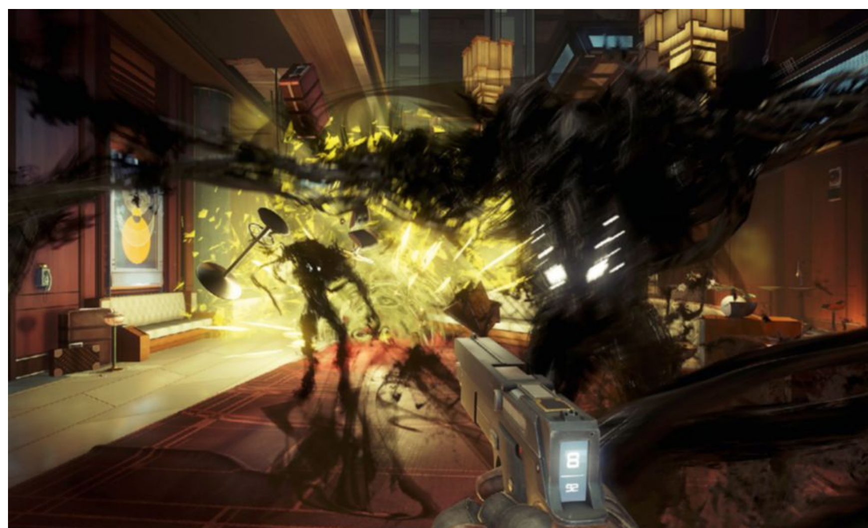
Smart deco

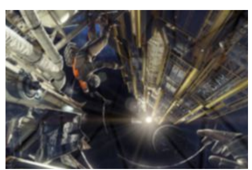
Prey's art team refers to Talos I's look as "neo-deco". As awkward as that sounds, it's a mantra that helps to keep the art style consistent with the fiction's history. The look of the station shifts depending on the era in which that section was incorporated. Its central chamber is the most utilitarian, based on Talos I's Soviet origins. From there, Arkane envisions a '60s twist on art-deco design – minimalist, but with heavy use of leather and gilding. On top of that, 21st technology has been fitted, and is a cool contrast against the warmth of the decor. It's a clever way to craft an aesthetic, ensuring a beautiful and thematically consistent style, but also meaning that *Prey* feels distinct from *BioShock*, its art-deco contemporary.

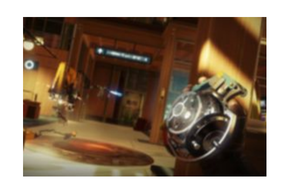




TOP **The GUTS – or Gravity Utility Tunnel System – is a series of winding zero-gravity utility tunnels that run the length and breadth of the space station.**
RIGHT **Typhons come in a variety of forms. Mimics camouflage as objects within a level, Poltergeist are invisible until they attack, and the humanoid-like Phantoms are capable of teleporting around a room.**
BELOW **The Glu cannon is one of *Prey*'s more versatile tools. While it has no direct attack function, it can be used to temporarily disable enemies, and also create platforms on which to climb**



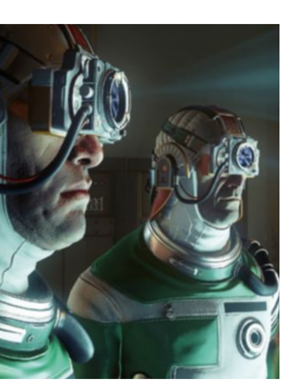




TOP **The aliens, or Typhons, aren't a new threat – they were originally discovered by Soviet cosmonauts in the '60s. Talos I was constructed in order to research these non-terrestrial beings.**
ABOVE **The player will have a degree of freedom to move around the space station. There are some hard story gates, but also plenty of optional areas that can reward those who explore**







those choices come at a cost. Resources are limited, so you're pushed towards specialisation. Do you spend your crafting materials on tools and items, or on guns and ammo? Do you use your Neuromods to upgrade alien powers, or more pedestrian bonuses to learn hacking and increase your strength? Do you want to hit things with a wrench, or subvert them with your mind?

With the shotgun out of action, Bare switches to Kinetic Blast – an explosive ability that can be learned by scanning aliens. Aiming Kinetic Blast puts Yu in psi-mode, which slows time to an almost imperceptible crawl that speeds up as the player moves the targeting reticule – much like playing *Superhot*. "These are pauses during which you can make tactical choices and switch gears," Bare explains, "because it can get incredibly lethal and some of the monsters are super-difficult. Having the ability to hit the targeting button, freeze everything for a second so you can go, 'OK, what am I gonna do? I have three shotgun shells left, I'm also out of psi, but I still have plenty of health.' And then you pick something and go."

"We don't have a chaos system. It's more what I would call natural consequences"

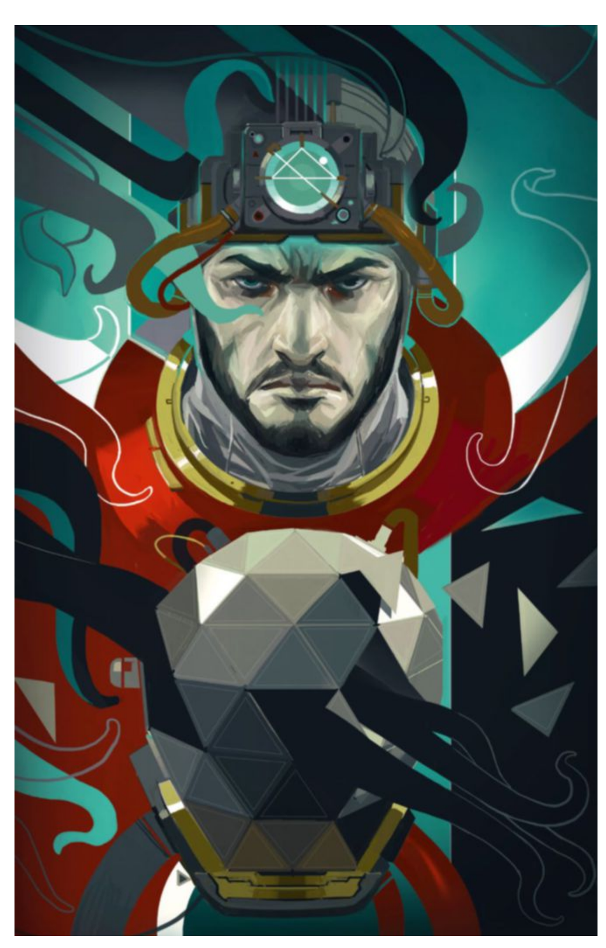
Scanning also reveals an enemy's weaknesses, but takes several seconds. This is where stealth can still be useful. "Stealth is probably the easiest way to do that because you'll want to remain unseen," Bare says. "But that's not the only way you can scan. You can be the guy who uses the stun gun. You can run up on the alien, shock them so that they're disabled for ten seconds, and then scan them. Or use the Glu gun to lock them down."

In our demo, the Telepath hits Yu with a Psychoshock, disabling his abilities. Switching to the Glu gun, Bare coats the Telepath in glue, disabling it and causing it to fall comically to the floor. This buys enough time to scan the creature, unlocking the Psychoshock ability, which lets Bare turn the tables on the Telepath, disabling its powers to make the rest of the fight much easier. Not all of the combat sequences we see are this involved, but the Telepath also isn't the most powerful alien type on Talos I. On the one hand, combat doesn't look as fluid or frenetic as in *Dishonored*, but the slower pace has its advantages. Much like in *BioShock*, there's the time and space to plan through an encounter against a powerful enemy and, even based on what we've seen so far, it seems as if there are plenty of ways to approach such a battle depending on your character's build. "That's our goal," Bare says. "Give the player all of these tools and game mechanics so that they can be super-expressive in how they solve problems." *Prey* has a few extra tricks, too, such as its jetpack. Designed for zero-gravity sections, it can also be used on the station proper as a way to quickly dodge and reposition, letting you back off and reassess.

But even this relatively short combat sequence can have consequences, both short and long term. In the short term, there's the danger of traumas – localised damage, including broken legs that cause Yu to limp across the level. Traumas require specific medical supplies, but can also be fixed via medkits if Yu has the relevant skill upgrade. In the long term, *Prey* tracks which humans you've killed – even those mind-controlled by a Telepath. "We don't have a chaos system like in *Dishonored*," Bare says. "It's more what I would call natural consequences. If you kill this person then the thing that they would have done at the end of the game is not possible – it's just a natural consequence because they're not here any more."

The demo is an encouraging look at a promising game, where every interaction offers a degree of choice, and every choice invites future consequences. As an RPG, *Prey* asks players to consider those choices, and apply their preferences across a simulation much more intricate than Arkane's more action-oriented games. If *Dishonored 2* and *Deus Ex: Mankind Divided* offer an immersive-sim experience in an FPS-style environment, *Prey* is reviving the slower, more measured approach of *System Shock* and its successors. Once again, Arkane is creating a sandbox of systems, inventing new and surprising ways to say yes to the player. ■











Design showcase

A look at the art, world and character design of *Prey*'s '60s-influenced universe

TOP **Suits were designed around a consistent theme to begin with, then tailored to specific roles across Talos I.**
ABOVE **While *Prey* has its own aesthetic, its characters have an exaggerated look similar to those of the *Dishonored* series.**
BELOW **The art team wants to convey the idea of 'vintage high-tech' through '60s objects refitted with modern elements**



TOP **Morgan Yu can be either male or female, and Arkane has reflected this choice in promotional material – releasing two versions of the debut trailer, one for each version.**
ABOVE **You use the Psychoscope to scan alien creatures in order to understand their strengths, weaknesses and abilities. This isn't how Yu learns their powers, though – that requires eyeball injections.**
RIGHT **The aliens are rendered as darkly as possible, with a silhouette-based design that makes them more difficult to read. Additional effects are used to make them look more sophisticated in firstperson**





VAMPYR

Dontnod's first open-world game is more Dishonored than Dracula

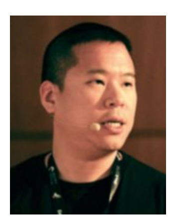
Developer Dontnod Entertainment
Publisher Focus Home Interactive
Format PC, PS4, Xbox One
Origin France
Release 2017

Among the things we disliked about our first glimpse of *Vampyr*, Dontnod's tale of occult predation in wartime London, was its combat – a graceless thirdperson mishmash of three-hit combos and pistol exchanges, peppered with crowd-control spells and teleport dashes. It was a shaky advert for a developer now wandering back into action-adventure territory after the success of episodic adventure *Life Is Strange*, but the addition of **Teppei Takehana** to Dontnod's ranks goes some way towards addressing our misgivings. Hired as animation director in June 2016, he brings ten years of experience as an animator at Kojima Productions and Quantic Dream, whose games tread a similar line between motion-captured plausibility and outright fantasy. While Dontnod doesn't have any new combat footage to show during our visit to the studio's Parisian HQ, Takehana's matter-of-factness is reassuring. "To make a responsive action game is really easy," he notes. "To have a responsive action game that looks *realistic* is more difficult. This is our challenge."

Another, more nebulous concern about *Vampyr*'s combat is that it will steal attention from the game's most intriguing elements: the ornate ugliness of its disease-ridden open world, which evokes both the intricately meshed city of *Thief* and the charnelhouses of *Amnesia: A Machine For Pigs*, and the way in which you're obliged to prey upon that world.

The game's smoggy, gaslit hunk of London is home to around 60 fully fleshed-out civilian characters – from nurses and coppers to drunks and protection racketeers. As recent vampire recruit Dr Jonathan Reid, you're under oath to aid these people, but drinking their blood bestows much more XP than you'll gain by dining out on generic enemies such as vampire hunters armed with flame weapons, or your fellow undead.

It's possible to complete the game without murdering any civilians, and refusing to feed doesn't actively weaken you, though it'll deny you access to the most exotic abilities. But this approach nonetheless charges the business of levelling with unusual import: in order to grow powerful you must erode the narrative foundations of the game, whittling down the cast, one by one, like a black-market surgeon harvesting organs. "If you want to act like Dexter and only kill the bad people, you can do that," game director **Philippe Moreau** explains. "You can select the people you believe are no good for humanity, hunt them down and feed on them. It's up to you, but what's interesting is that you don't really have a choice if you want to evolve. You need to feed on people on a regular basis. It's a very different approach, because we're not used to sacrificing NPCs, the people we talk to." *Vampyr*'s principle choice, in other words, ▶







FROM TOP **Animation director Teppei Takehana, game director Philippe Moreau, and narrative director Stéphane Beauverger**



Vampires were once invoked as a way of explaining the effects of disease. Here, the Spanish flu pandemic is invoked to explain away the effects of vampirism





isn't whether to be good, but how little you can be evil without progress grinding to a halt.

Feeding on civilians has a range of practical effects, both immediate – drain a shopkeeper and you may struggle to find upgrade materials for your trusty bonesaw and pistol – and long-term, as already-precarious communities unravel for want of a key support, shutting off certain possibilities while perhaps exposing others. Not all the characters are as crucial to society's well-being as others, of course – one relatively ignoble example is Ichabod Drogmorton, a bewhiskered fop posing as a legendary vampire slayer – but there's more to each than meets the eye. In Drogmorton's case, you might undertake a few odd jobs for him, helping to distribute posters recounting his exploits, before deciding whether to make him your dinner. There's always an element of calculation involved, because Reid can't risk biting civilians in public – you'll need to get each victim alone, which typically involves building trust by choosing the right responses in conversation, perhaps referring to a set of character bio screens that recall Frogware's *Sherlock Holmes* series. If you have enough Willpower, an energy resource that compares to a Persuasion stat, you can also manipulate the subject's mind to force them to tell the truth about something, or use hypnosis to lead your quarry away to a dark corner.

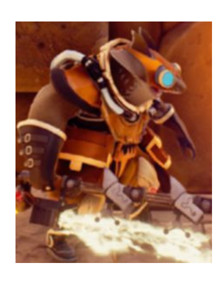
"You need to feed on people on a regular basis. It's a very different approach"

Vampirism has its downsides, naturally – you can only enter occupied buildings on invitation, for example, so breaking and entering isn't an option. Narrative director **Stéphane Beauverger** has taken a pick-and-mix approach to vampire lore, shifting the emphasis away from kooky B-movie transformations and towards the arts of persuasion and seduction. "We decided that our vampires have solid bodies, they can't turn into fumes or bats, things like that," he says. "The hero can see himself in a mirror. You can take a picture of him. Silver won't do much damage to him." Reid is no slouch as an infiltrator, however, able to warp through mid-air like *Dishonored*'s Corvo, and the environment is built to reward such feats of agility, extending from cellars and sewer mouths to rickety iron balconies and attics. The world will be largely closed off at the start of the game for the sake of tutoring players, with different areas becoming available as you develop your abilities and encounter – or devour – certain characters.

However you dispose of them, *Vampyr*'s assorted denizens seem deserving of contemplation. "The Great War is very important in terms of both scientific discoveries, but also social change – the birth of communism and feminism, the crumbling of the old British and French empires," Beauverger says. "Some of our characters will be involved with all this on a personal level, and they'll give you hints about how it was to be an Indian in London at the time, or a Chinese woman, or a Muslim, or a pauper who doesn't have the right to enter some parts of the city." It's largely up to you when you choose to spill a civilian's blood, so there's the prospect of spending the entire story getting to know everybody on the map, painstakingly unearthing the threads that bind these lives together, before cutting a swathe through the populace in the final third.

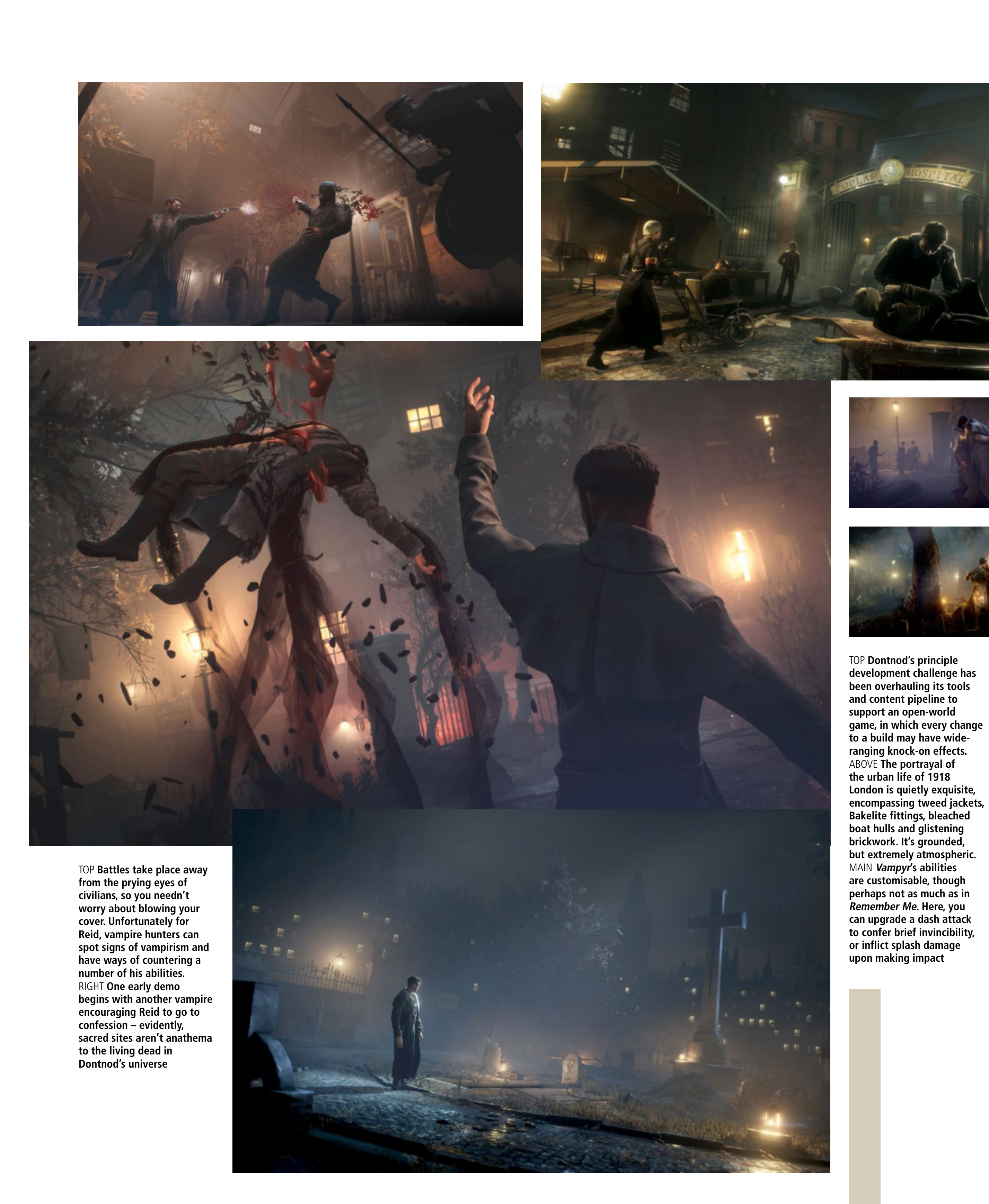
We described *Vampyr* as a departure in **E**292, but in some ways this is more a work of consolidation for Dontnod, building on the studio's proficiency with Epic's Unreal Engine and tackling many of the same design questions as *Life Is Strange* and inaugural project *Remember Me*. The latter also saw players manipulating NPCs via arcane means while exploring modest urban playsets and cracking the odd skull, but it would've benefited by being less constrictive. In opting for a persistent, continuous environment, *Vampyr* is out to address this limitation even as its neighbourhood echoes the melancholy smalltown intimacy of *Life Is Strange*.

"None of us are saying, 'If you like *Life Is Strange*, you'll love *Vampyr*' – we can't say that," Beauverger concedes. "But I certainly believe that somebody who appreciated the narrative aspect of *Life Is Strange* will find the same thing in *Vampyr*. The same tragedy, the same sadness. Vampires are sad creatures." ■



Pirate wing

With the success of *Life Is Strange* behind it, Dontnod has opened a small sister studio, Dontnod Eleven, to work on smaller and more experimental projects – its debut project, *BATTLECREW Space Pirates* (above), is a 4v4 online PC action game. "It's more of a laboratory – here, the financial aspects are more [significant], the projects are more expensive, so we have to be very careful," CEO **Oskar Guilbert** explains. As for future games from the main Dontnod team, Guilbert has a clear view of the studio's strengths. "We've found our recipe on a very theoretical level – narrative, immersion, a believable world, and I would say ordinary people in extraordinary situations," he says. Not that he's ruling out anything that doesn't fit easily into that recipe: "Our studio is based on people's know-how, and if somebody wants to make a game and convinces the company that this is the right thing to do, why not?"



TOP **Battles take place away from the prying eyes of civilians, so you needn't worry about blowing your cover. Unfortunately for Reid, vampire hunters can spot signs of vampirism and have ways of countering a number of his abilities.** RIGHT **One early demo begins with another vampire encouraging Reid to go to confession – evidently, sacred sites aren't anathema to the living dead in Dontnod's universe**

TOP **Dontnod's principle development challenge has been overhauling its tools and content pipeline to support an open-world game, in which every change to a build may have wide-ranging knock-on effects.** ABOVE **The portrayal of the urban life of 1918 London is quietly exquisite, encompassing tweed jackets, Bakelite fittings, bleached boat hulls and glistening brickwork. It's grounded, but extremely atmospheric.** MAIN ***Vampyr*'s abilities are customisable, though perhaps not as much as in *Remember Me*. Here, you can upgrade a dash attack to confer brief invincibility, or inflict splash damage upon making impact**



HYPE

MARVEL VS CAPCOM: INFINITE

Japan vs America, casual vs hardcore, story vs sport: Marvel Vs Capcom returns

Developer/publisher	Capcom
Format	PC, PS4, Xbox One
Origin	Japan
Release	2017



While Capcom has emphasised the team's intention to make a game that's accessible for newcomers, *Infinite*'s gameplay debut arrived at the Capcom Cup, which gathers together the finest fighting-game players in the world

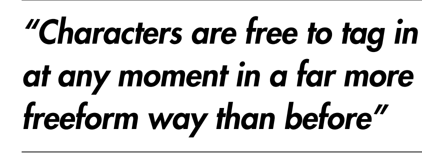


MARVEL VS CAPCOM: INFINITE

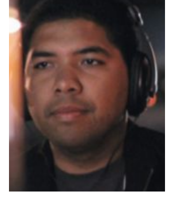


Marvel Vs Capcom should, in theory, be the Japanese fighting-game doyen's flagship series, the megawatt appeal of Marvel's loan characters yanking the game out of its genre's niche. However, while the series certainly has its staunch fans – it has long been a fixture on the competitive scene – its sales have never rivalled those of *Street Fighter*. This is surely part of the reason for why there's been a six-year hiatus for the series; an opportunity not only for absence to make fans' hearts grow fonder, but also for Capcom to reassess its approach behind closed doors.

"We looked at the chokepoints with this series and found that the biggest issue was accessibility," Capcom's **Peter Rosas** explains. The vast range of options facing players when assembling their teams – three characters, each with a choice from three assist moves – in previous games proved daunting. "Players



"Characters are free to tag in at any moment in a far more freeform way than before"



Peter Rosas, co-producer

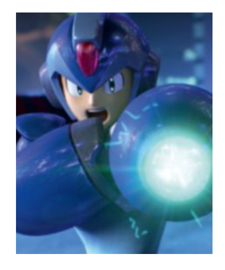
had to make about six decisions before they got to a battle," Rosas notes. "People would pick two characters they felt an affinity for, but the third choice would inevitably be picked for his or her function. Perhaps they had a strong anti-air [move], or something. It felt like a redundant choice."

To simplify all the pre-match decision-making, *Marvel Vs Capcom: Infinite* is played with teams of two, a return to the setup of *X-Men Vs Street Fighter*, which Rosas says lets Capcom "emphasise the sense of partnership and bond". The simplification has also allowed the development team, which is led by Norio Hirose – whose prior credits include *Capcom Vs SNK*, *Rival Schools* and *Street Fighter Alpha 3* – to allow for more freedom and control in the arena. "Characters are free to tag in at any moment and finish each other's combos in a far more freeform way than before," executive producer **Mike Jones** tells us. "You can create your scenarios with assists and counters, and carefully choose the order in which you execute your attacks. In this way you create your own assists and setups." All the functionality that players have come to know and love is present, Jones is quick to assure, but it's performed in different ways.

That *Marvel Vs Capcom: Infinite* is a fresh start is evidenced in its non-sequential title. The subtitle refers to the Infinity Stones, six divine, ability-warping orbs that have been imported from Marvel's labyrinthine fiction. Narratively, they'll tie the Marvel and Capcom universes together; in mechanical terms, they replace the third character, augmenting your team with one newly executable move (a dash or projectile, for example) and a screen-filling super. "You might pick the speed stone to help compensate for a slow character's weakness," Rosas says, "or to further press an advantage in a quick character."

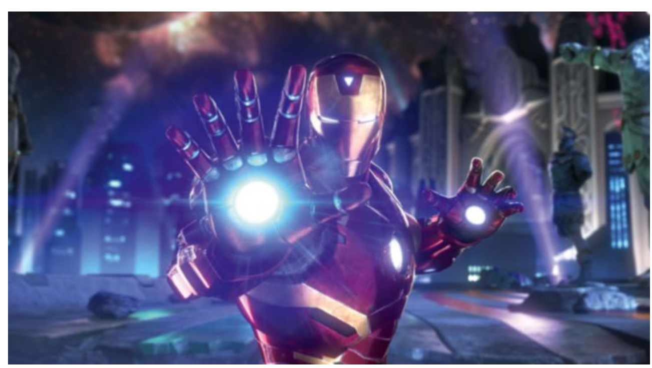
"We looked at the history of these games and found that typically only five or six characters end up being truly competitive," Jones explains. "What the stones do is to take team creation to a system level." While the design seems simplistic, it has made balancing complex: characters designed to be played without projectile moves suddenly gain them, while slow, powerful fighters can acquire a flighty dash. In practical terms, the stones add 12 new moves to every character in the roster.

The tension at the heart of Capcom's task is clear: how to make a game with a broad enough appeal to capitalise on Marvel's still-growing popularity, while delivering a proposition that is deep and interesting enough for the competitive community, on whose opinion and support the game's ultimate fate depends. Director of production **Michael Evans** believes – possibly against the odds – that Capcom can succeed in meeting the needs and expectations of both groups. "On the casual side, with those players who don't have thousand of hours to spend in training mode, we are going to have a story mode, easy-to-use pad controls and various kinds of optimisation," he explains. "We don't want to overwhelm the player. But for players who want to get into the lab, I want to make sure people who are investing time are rewarded. I don't think anybody has to get shut out." ■



X-Man down?

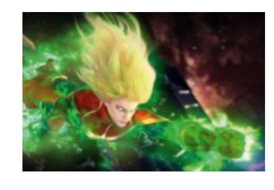
Story, typically of secondary interest in Capcom fighting games, will play a more central role in *Infinite*. "Story is at the core of everything Marvel does today," says Marvel Games creative director **Bill Roseman**. "We want to explore how these characters from two different universes are coming together." That narrative challenge escalates with the introduction of characters from ever more diverse series. Then there's the issue of fans' expectations. Currently no X-Men characters have been announced, and Wolverine's absence in particular has been of concern for longterm fans of the games, "As far as X-Men go," says Evans, "let's just say we're well aware of our history and legacy with this franchise. That's not lost on us."

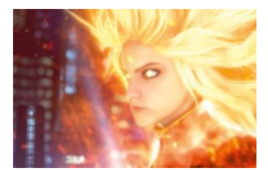




TOP ***Marvel Vs Capcom*** **stalwarts Morrigan and Captain America were added to the playable roster after the teaser trailer debuted Ryu, Mega Man X, Iron Man and Captain Marvel.**
RIGHT **Only the Power and Time infinity stones have been officially announced, but Capcom's dev team tell us that they've been looking at how stones can affect attack, mobility, vitality, space control and projectiles.**
BELOW **The team, led by Hirose Norio, is comprised of many Capcom fighting game veterans. "It's a hitlist of talent," Evans says. "It's inspiring. I get to work alongside the people who made *X-Men: Children Of The Atom*"**







TOP **In prior entries to the series, professional players have narrowed the character choices to just a handful of viable options. The team is eager to ensure as many of *Marvel Vs Capcom: Infinite*'s roster can be worked into serious play. "We want every character to be both interesting and competitive," Rosas says.**
ABOVE **Stones and matchups will, according to Capcom, make every character a workable choice at high-level play. "A character that wasn't competitive on their own can become a very powerful force with a certain coupling of teammate and buff," Evans says**





Developer SMAC Games
Publisher Mode 7
Format PC, PS4, Xbox One
Origin UK
Release 2017



TOYKO 42

SMAC's smart, stylish thriller holds up to closer inspection

Sometimes it helps to get a fresh perspective on things. In *Tokyo 42*, however, doing so is absolutely essential. In this top-down world, threats are everywhere. Moving and shooting are, as such, tremendously important. But just as vital to your chances of survival are the camera controls, which rotate your perspective to the left or right. This is a game of manipulating space, denying enemies line of sight whether in or out of combat.

"Perspective is the key thing," says **Maciek Strychalski**, co-creator of *Tokyo 42*. "Because we've got blocking buildings and stuff, you're having to constantly rotate the camera. In terms of level design we've made sure that at any point you're visible from two or three angles – but you're not *always* visible. Really, half the game is about getting the right angle."

> ***"Being an assassin doesn't mean killing people, but raising their insurance premiums"***

That's especially true in a minigame we're shown, a daft, physics-heavy motorcycle street race that undermines the obvious Akira reference as AI drivers smack haplessly into barrier after barrier. But it's true everywhere, across the singleplayer's open world and the more condensed arenas that play host to *Tokyo 42*'s multiplayer deathmatches. While it's given the two-man design team a few problems to overcome – walk into a building and the roof simply lifts off and disappears – the opportunities that lie in putting such emphasis on camera positioning are intriguing.

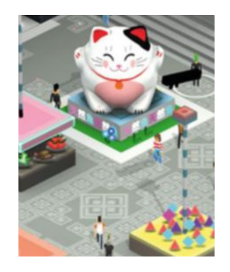
That's especially true in multiplayer, which begins with all players milling anonymously in a crowd. You can click on a citizen you think is acting suspiciously, marking them with an eye icon so you can keep track of them. If you think you're being watched, however, you can simply duck out of sight and change your character skin, reemerging in different clothes, your opponent's tracker lost. Anonymity is key, then, but impossible to maintain: a depleting battery meter in the bottom corner of the screen can only be topped up by getting kills, and while you load in with a sword at your side, you start with no ammo and can only top it up with conspicuously placed pickups. Powerful guns are left in too-plain sight, too: one level has an assault rifle in a large glass dome in the centre of the level, accessible only by a single door that leads down a long, narrow hallway. Get in, and you're going to have to fight your way out.

***Tokyo 42* began** life as a multiplayer game, and a one-level prototype was enough to secure publisher Mode 7's interest. While map design suggests a style of play – small, enclosed areas for fast-paced combat, larger spaces for more drawn-out engagements – there'll also be a battle royale mode set across the open world that hosts the singleplayer component. You're cast as an assassin of sorts in a future Tokyo that is as good as run by a shadowy pharmaceutical company that keeps the population doped up on a drug called Nanomeds. "They rebuild tissue very quickly," co-creator **Sean Wright** explains, "so you're never doing real murder. Being an assassin doesn't exactly mean killing people, but raising their insurance premiums. It's a harsh world, but nobody dies." Right you are.

Nods to the source material come thick and fast – a walker tank inspired by Ghost In The Shell, a shoulder-mounted heavy laser whose explosions are pure Akira – but *Tokyo 42* has an identity and style all its own. While the future-anime environments catch the eye, it's the people within them that bring the whole thing together, helping a series of hand-designed levels cohere into a believable place. Here's one area in which perspective doesn't matter: regardless of where the camera is pointed, *Tokyo 42* looks great. ■

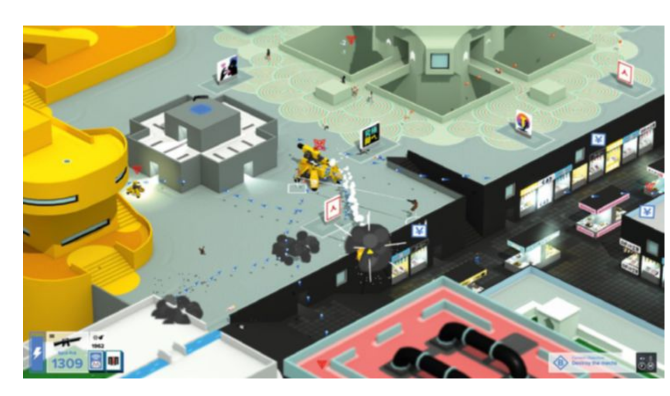


FROM TOP **Sean Wright and Maciek Strychalski, co-creators of *Tokyo 42***



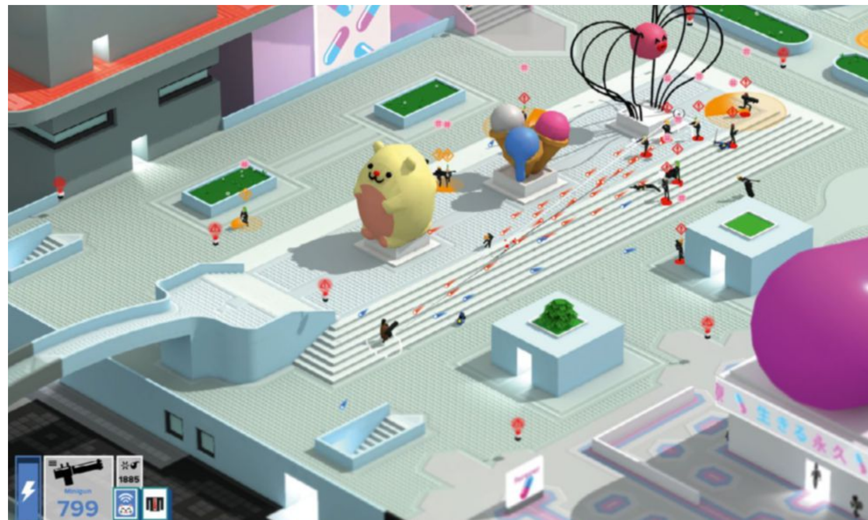
Rest control

Tokyo 42's multiplayer mode is a game of contrasting pace, the posed nonchalance of everyone feigning anonymity breaking into frantic gunfights as players let slip their masks. While comparisons to the likes of *Spy Party* and *Assassin's Creed* are obvious, other games did not inspire what *Tokyo 42* was going to be, but what it wasn't. "In skill-based multiplayer games," Strychalski says, "like *Call Of Duty* or something, you're always *on*. We really wanted a game where you could just stop for a while, and take a breather before it gets intense again. There's a lot of skill in the fighting, but you don't have to always be on form." With our *Call Of Duty* skills leaving us as more grey hairs appear, we appreciate the sentiment.

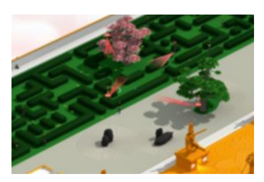




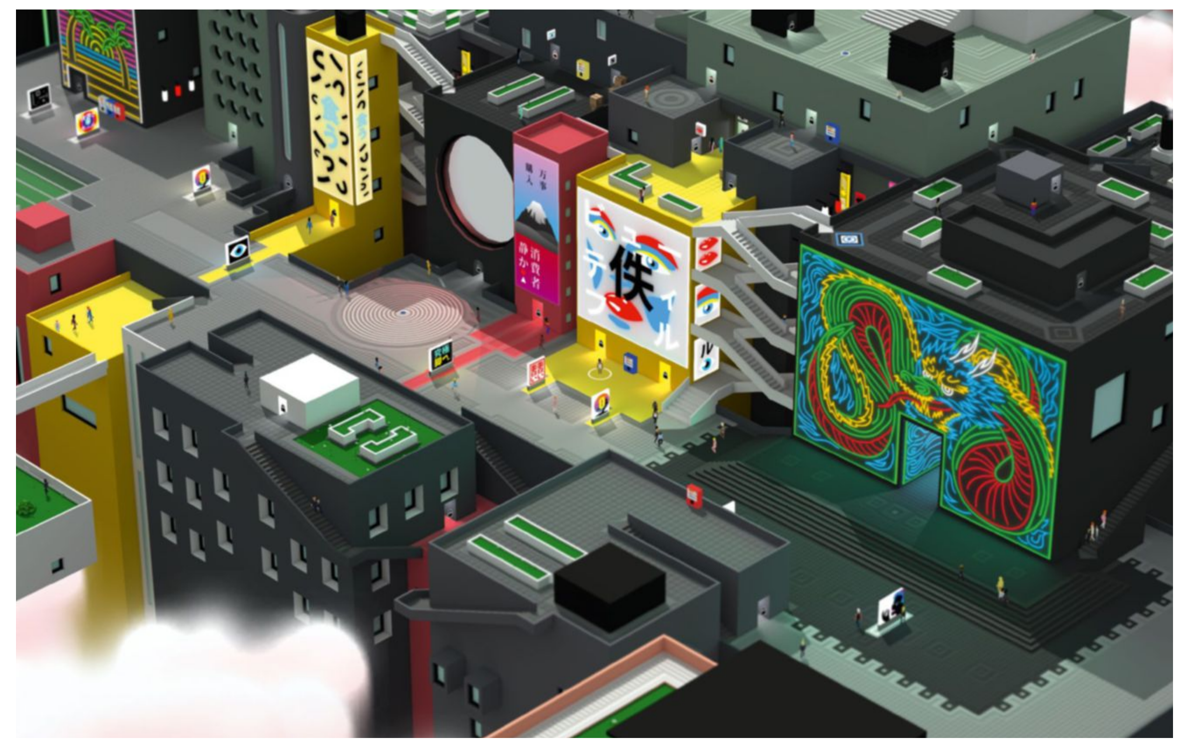
ABOVE **The team tried to take the walker tank's Ghost In The Shell reference further. "We wanted to have that move where you jump on the tank and rip the cabling off the top of it, like in the movie," Strychalski says, "but we couldn't quite get there."**
RIGHT **Combat is skill-based – lining up shots is tough with all that enemy ordnance – but heavily tactical too, with a strong focus on using cover. Until the grenades start flying, anyway.**
MAIN **The use of perspective as a gameplay mechanic makes line of sight critical in combat, but also gives SMAC licence to craft some tricky environmental puzzles. Strychalski references *Fez* when talking about the design opportunities**





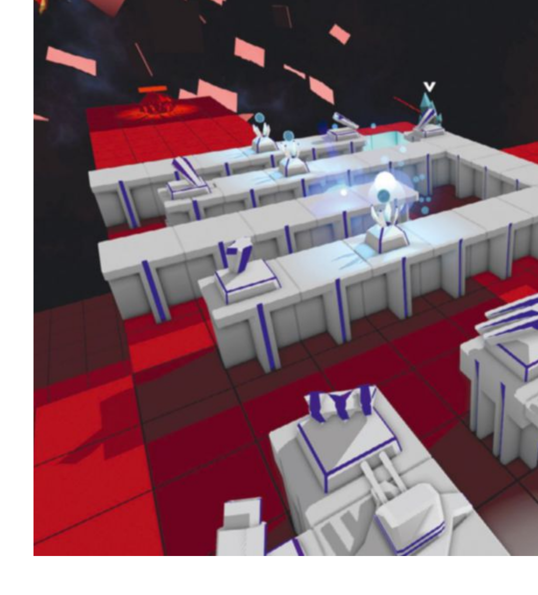


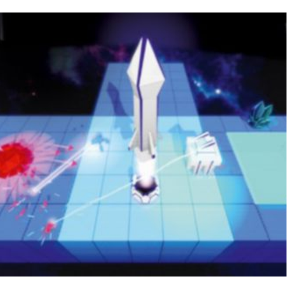
TOP **In addition to the police, you'll have to contend with various factions. The devs aren't afraid to play things for laughs: there's a nudist faction, for instance, called the Commandos.**
ABOVE **A maze is a convenient way of showing off *Tokyo 42*'s stealth mechanics (Strychalski: "There are areas that are less literal!"). It's fairly forgiving – guards won't be alerted by corpses you've left behind, for instance**





Developer/publisher Stellar VR
Format PSVR
Origin UK
Release February





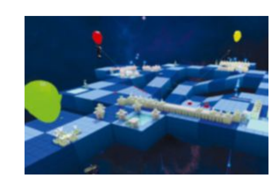
KORIX

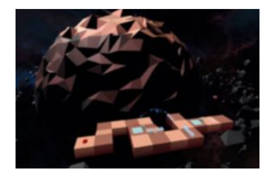
An RTS hybrid in which nuking it from orbit is no way to be sure

This is not going well. It's our fault, in fairness: a couple of minutes into our first play of *Korix*, we had watched as our laser turrets ripped a small troop of enemy soldiers to shreds and joked that it was too easy. "You'll see," creator **Mark Taylor** said – and we did. The threat in *Korix*'s singleplayer campaign ramps up quickly, and exponentially; before long the masses of onrushing troops are smashing down walls, destroying units at a canter and marching on towards our base, which falls in seconds. Win or lose, a campaign level of this pacy blend of RTS and tower defence will never last more than 12 minutes.

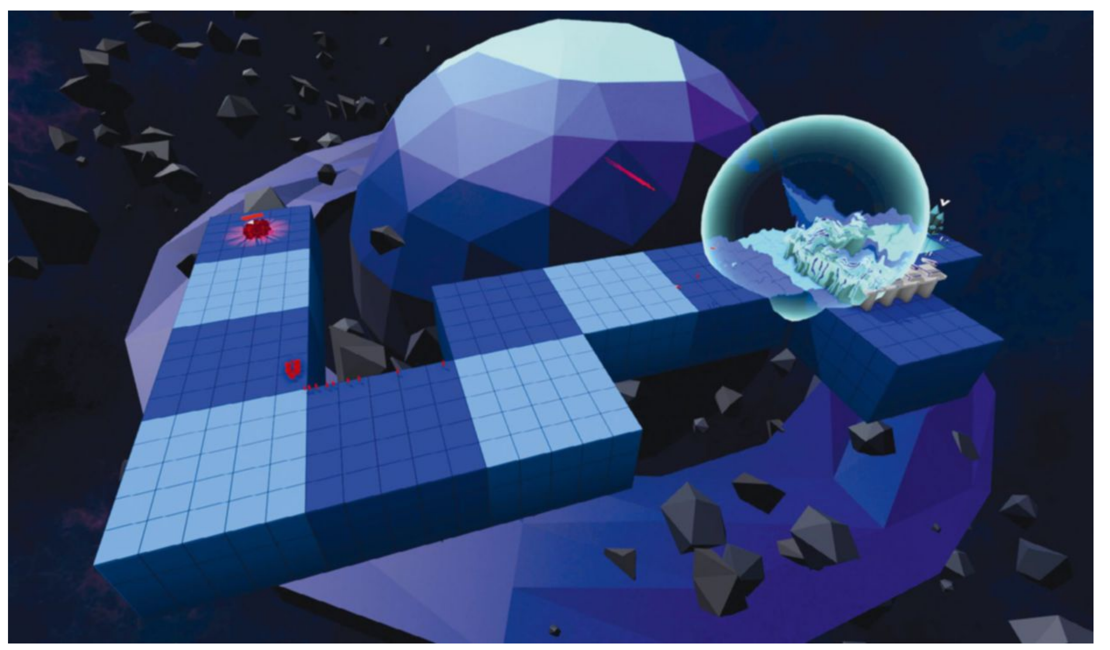
That's perhaps a necessary design decision for a game that is played exclusively in VR, where short sessions are considered best practice. But it's a matter of pacing as much as it is comfort, the constant, sharp uptick in enemy strength requiring you to work quickly. Early on, once you've sent workers out to gather resources, you'll need walls to funnel the opposition's footsoldiers; atop them you'll build artillery to shell them from afar, laser turrets to take out the ones that break through, and Pulsar units to slow them down. You'll spend more resources on upgrading your turrets with greater range, fortifying walls, perhaps improving your base's defence. But just as you start to feel comfortable, a mass of troops bursts through a wall. An airborne unit sails straight over all your hard work, and starts shelling your base. Worst of all, the well of resources that your workers have been siphoning is starting to run dry. When war is designed to last no more than 12 minutes, things can go wrong awfully quickly.

The solution to the resource drought is the collector unit, which can be placed anywhere

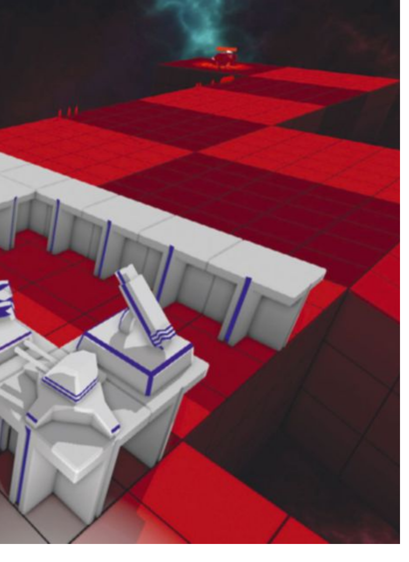


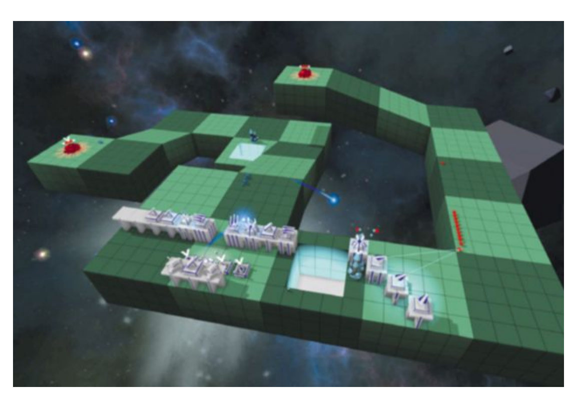


ABOVE ***Korix*** **isn't exactly pushing PS4 to its limits, but when we meet, Taylor is mulling over how the game could best take advantage of PS4 Pro. Nothing's been confirmed, but one idea would be a first for PSVR**

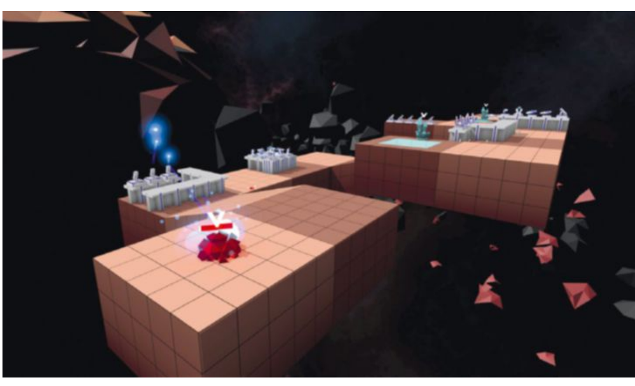


Map size, and complexity, scales according to the number of participants. This example is designed for two players, but fourplayer maps are much larger, and often multi-tiered





LEFT **While the field of play may look small, the action ramps up so quickly that it's all too easy to fail to notice that things have gone wrong somewhere. Keeping track of the entire map is a vital skill to learn**



TOP LEFT **A fully upgraded set of defences is an intimidating prospect indeed. You can instruct your forces to focus their fire on a specific wall or unit by pointing at it and holding a button down.** ABOVE **In multiplayer, your opponent's current perspective on things is shown by a floating head and a replica of their controller. Since you share the same four positions, you can try to put them off by waving your Move around in front of them**

Focusing on worker units is key early on, since you'll need resources if you're going to stand a chance. Cost per unit increases the more of them you build, too

on the map and saves workers from schlepping all the way back to your base with their haul. "We built the collector for online play," Taylor says. "If you have four players, and a lot of resources in the centre of the map, you can build a forward base, capture the resources, build a collector and defences around it and then you're all fighting over resource points."

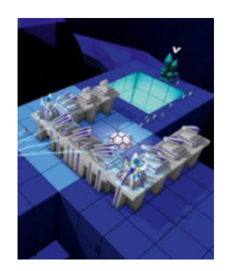
While our demo is only playable offline, it's clear that multiplayer is *Korix*'s beating heart. The campaign serves as part tutorial, part progression system: each of its 12 levels unlocks a new unit type, and each is designed to showcase said unit's capabilities. Once the campaign is complete and all units are unlocked, solo players can head to Skirmish mode to play on campaign maps against AI opponents with a full selection of toys. Or they can head online where up to four players can play across 14 maps, where the AI can control any vacant teams, and players can play competitively or cooperatively. The latter sees each player given their own base and resources, but lets them destroy, build on or upgrade each other's fortifications and units.

The goal is, naturally, to destroy the enemy's base, but you needn't be aggressive about it. Yes, you can build your base forward, pushing your opponent back until the units you're deploying are right on top of them. However, you can hang back, too, building a strong base and hoarding resources until you can afford a nuke. At 2,000 energy, it's the costliest unit in the game, and sees your base open like a silo, a rocket arcing up through the air. The counter-nuke costs half the price, flies twice as fast and automatically neutralises the threat providing it's deployed in time, and Taylor describes some chaotic climaxes to internal playtests, where 20-minute turtling sessions end with some frantic atomic fireworks.

> ***The goal is to destroy the enemy's base, but you needn't be aggressive about it***

The nuke is a particular delight in VR: we loom over *Korix*'s playfield and look down as it launches from our base, then move back a little and trace its arc with our head before the payload slams home. But the whole game is an excellent fit for VR, its diminutive scale making it feel as much a god game as it is an RTS or tower defence, the Move controller offering a fast, accurate way of placing units, and a one-button teleport that moves you between four compass points allowing you to shift perspective as the action demands. The result is a smart, intuitive and keenly paced genre mashup that, crucially, still manages to feel fun as the enemy streams forth, smashing our base to smithereens yet again. ■





Too close for comfort

VR designers aren't solely preoccupied with how to make the best game they can; those that seek the largest possible audience must also make sure to offer a comfortable experience. Despite the chaos on the battlefield below you, *Korix* is one of the least intense games we've played in VR. The only potential concern is the teleport, but a sub-100ms response time means the view changes before your brain can react adversely to it. Taylor hosts frequent playtesting sessions at his studio, but hasn't had to rely on external feedback. "I'm terrible with VR sickness," he says. "So I can test on myself. If I feel a bit queasy within ten minutes, I know I've done something wrong."



ROUNDUP

THE LAST OF US PART II

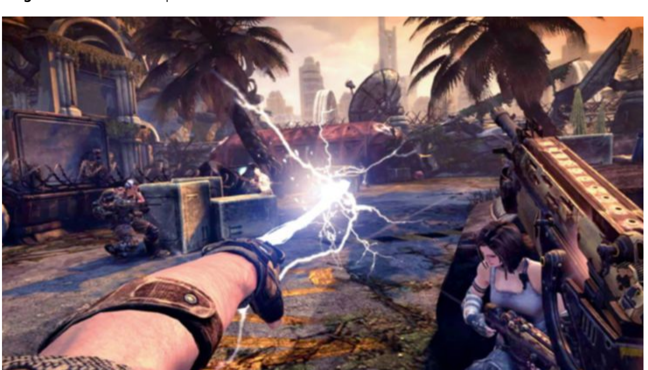
Developer Naughty Dog **Publisher** SIE **Format** PS4 **Origin** US **Release** TBA



When we visited Naughty Dog for E276's cover story, creative director Bruce Straley was about to head off to Joshua Tree for a few days of decompression time after the completion of *Uncharted 4*'s first gameplay demo. Evidently finishing the game took a greater toll; today, he's on a year-long sabbatical, and so won't be involved with *The Last Of Us Part II*. Westworld writer Halley Gross is on board to help Neil Druckmann craft a game that casts Ellie as its star in a story about hate, as opposed to the first game's love. One theory posits that Joel is dead, with Ellie on a revenge mission. Whatever the case, this already feels essential.

BULLETSTORM: FULL CLIP EDITION

Developer People Can Fly **Publisher** Gearbox Publishing **Format** PC, PS4, Xbox One **Origin** Poland **Release** April



This high-octane, high-score-chasing FPS always deserved better; hopefully a revamp for modern hardware will see it find the audience it always deserved. With 4K support and a playable cameo from Duke Nukem, there's only one real area of concern: the involvement of Gearbox. While it's technically the publisher – this being the first game on the new Gearbox Publishing label – boss Randy Pitchford says his firm is "helping out" with development. Hmm.

NEX MACHINA

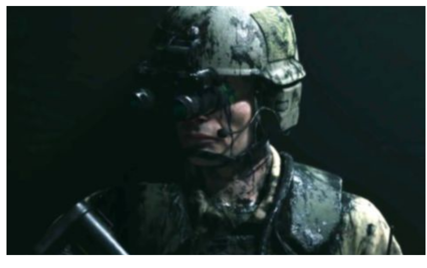
Developer Housemarque, Eugene Jarvis **Publisher** TBA **Format** PS4 **Origin** Finland **Release** TBA



Nex Machina is a twin-stick shooter that evokes the spirit of Eugene Jarvis's arcade heyday with regional leaderboards, monthly tournaments and a spectator mode. Well, the maker of *Super Stardust* and *Resogun* and the man behind *Defender* and *Robotron* were never going to make a JRPG, were they?

DEATH STRANDING

Developer Kojima Productions **Publisher** SIE **Format** PS4 **Origin** Japan **Release** TBA



Hideo Kojima's mission to baffle the game-playing world with performance-captured avatars of his favourite Hollywood types continues. Some solid info, at least: Kojima Productions is building the game using Guerrilla's Decima engine. Beyond that, we have no idea what is happening please send help.

YAKUZA KIWAMI

Developer Yakuza Studio **Publisher** Deep Silver **Format** PS4 **Origin** Japan **Release** Summer



PlayStation Experience brought confirmation of two more *Yakuza* games heading west. *Yakuza 6* won't be out until 2018, but *Kiwami*, a remake of the PS2 game, is mere months away and offers 1080p60 visuals, a thirdperson camera, and sees fruitcake Goro Majima pop up for a scrap at random intervals.


PlayStation®4
EXCLUSIVE
The Last Guardian
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#302

VIDEOGAME CULTURE, DEVELOPMENT, PEOPLE AND TECHNOLOGY





HEAR DARK

After eight years working on LittleBigPlanet, Tarsier is exchanging dreams for nightmares

By Ben Maxwell


TS OF
NESS



Game Little Nightmares
Developer Tarsier
Publisher Bandai Namco Entertainment
Format PC, PS4, Xbox One
Release 2017

Tarsier's brightly coloured, playfully decorated premises are exactly what you'd expect the home of a studio that's spent the past eight years working closely with Media Molecule, on its *LittleBigPlanet* series, to look like. A hotchpotch of lampshades and rugs, a familial collection of framed photos of the team, and a range of stately looking furniture – we're given the rundown of which chairs are the most comfy during our tour – make the space feel welcoming and homely. There's fresh fruit in the kitchen, naturally, and not a single employee appears to be wearing shoes. Underneath this small company's friendly exterior, however, something darker has been fermenting, waiting for an opportunity to bubble to the surface.

That spectre has emerged in the form of *Little Nightmares*. Known as *Hunger* prior to Tarsier's publishing deal with Bandai Namco, and a distant relation to the company's unreleased first project, *The City Of Metronome*, the dark adventure evokes the surreal output of French directors Jean-Pierre Jeunet and Marc Caro, whose collaborative work includes The City Of The Lost Children and Delicatessen. The game casts players as Six, a vulnerable but capable child lost in the belly of an ocean-borne contraption called the Maw. Six's bright-yellow raincoat seems to be the only surface in the place that doesn't greedily swallow all of the light. Within the depths of this buoyant nightmare, terrible creatures lurk – or, perhaps, are employed – as boatloads of children are dropped off at the surface entrance, never to re-emerge.

"*Little Nightmares* has been something that we've been wanting to do for a very, very long time," explains lead game designer and co-creative lead **Dennis Talajic**. "*LittleBigPlanet* was a fantastic project to work on, but most of us were dreaming of doing our own thing. We learned a lot from working on *LBP*, and without those years we wouldn't have been able to do *Little Nightmares*. But I think part of the reason why this is a cute horror game is because we've been doing *LittleBigPlanet* for so long – it felt like it was time to get some of our nastier side out as well. If you look at *LittleBigPlanet Vita*, you'll see that it's a little bit more dark than the other games. But we're shifting towards something even darker."



The studio's gloomy side has always been there. The aforementioned *Metronome*, a curious adventure game in which sound could be used as a weapon or to solve puzzles, was the game around which Tarsier initially formed. But while it failed to find traction with publishers – despite causing a bit of a stir at E3 2005 – some of the visual language that it deployed has found its way into *Little Nightmares*, in the exaggerated forms of its marauding creatures, their crooked faces, ▶



"IT FELT LIKE IT WAS TIME TO GET SOME OF OUR NASTIER SIDE OUT AS WELL"

DISCHORD

Right from the beginning, Tarsier has been drawn to the idea of youthful characters taking on a world that was never meant for them. In the studio's first project, *City Of Metronome*, a young boy, eyes covered with a sweeping fringe that emerges from a flat cap, explores a creepy city powered by sound. The game's protagonist wears a gramophone-esque backpack capable of recording and playing back samples, which he can then use to attack or subdue enemies, or activate machinery. "[*Little Nightmares*'] setup was present then as well," lead narrative designer David Mervik recalls. "This kid, Ten, in this environment dealing with all this weird stuff. A very different atmosphere to *Nightmares*, but tonally I think they're brethren. So that's in our DNA to begin with, this enjoyment of child characters and fish-out-of-water scenarios." While the game failed to find a publisher at the time, Tarsier remains attached to the idea and still hopes that the project could be resurrected in the future.

Little Nightmares was inspired, in part, by games such as *Clocktower* and *Heart Of Darkness*



Lead designer Dennis Talajic

"A CHILD PROTAGONIST MAKES IT POSSIBLE TO CREATE OBSTACLES OUT OF EVERYDAY OBJECTS, LIKE A DOOR"

Six's mac feels almost garish against the game's grimy beige colour palette. While you'll often need to run from threats, many rooms invite you to linger



and the perpetual twilight of the Maw. And this time, like Six, Tarsier is striking out on its own.

"It's been a huge challenge for us," Talajic tells us, "because *Little Nightmares* isn't just our first unique IP, it's also the first time we're developing a multiplatform title. *Metronome* was before my time at the studio, but my understanding was we weren't ready for a project of that scope back then."

"The world wasn't ready for *us*," producer **Henrik Larsson** laughs. The studio is now working on three homegrown projects: *Little Nightmares*, PSVR puzzle game *Statik*, and a secret title that it isn't ready to talk about yet. "In terms of the studio, it's a big step – it's like riding a bike without stabilisers," Larsson says. "So it's very exciting, and because we're doing multiple projects at the same time, with different publishers, different IPs, it *is* a challenge. But it's where we want to go."

From what we've seen so far, everything appears to be in hand. The demo Tarsier took to Gamescom in August was a confident showing that illustrated *Little Nightmares*' bold vision. It was constructed, we find out during our trip, from small snippets taken from different points in the game, so it isn't representative of the Maw's final layout. But its skewed environments, scale-based twists on platforming, and simple, physics-driven puzzles proved immediately engaging.

While the new section of game we're let loose in during our visit isn't quite as polished (when we arrive, the studio is scrambling to get a demo ready for a January press event, and some sections are still unfinished), it's no huge stretch to interpret Tarsier's intentions. And even amid what amounts to a digital building site, Six remains a charming presence, with weighty, momentum-driven clambering proving a continual pleasure.

"Having a child protagonist enables us to have a tactile, wacky control scheme, and makes it possible to create obstacles out of everyday objects, like a door: just reaching the handle can be a hurdle all of a sudden," Talajic explains. "We can reframe traditional elements such as platforming – now you platform across the furniture. And that's something that only becomes possible because of the exaggerated size differences. It helps emphasise how vulnerable you feel in the Maw, and allows us to get across silly aspects mixed with the horrible."

Six is delightfully animated, and just moving about the creaking environments is enjoyable. A striking yellow rain mac hides most of Six's form, but extruding little arms and legs provide just enough visual feedback to ensure that controlling the stricken child feels precise. Holding R2 allows you to grab and drag or push moveable items, as well as dangle from switches and doorknobs, and climb up furniture. ▶

BIG DREAMS

While *Little Nightmares* is leading the charge, *Statik* and an unannounced project are also waiting in the studio's wings. Going from work-for-hire to working on three games simultaneously is an ambitious switch, but it hasn't changed Tarsier's goals. "I think what's been on our side with coming out with these at the same time is that we're not trying to be bigger than we have capacity for. We're still about quality," Mervik says. "*Little Nightmares* is about fewer characters, with more focus on each. And with *Statik* we're like, 'This doesn't need to be more than a two-hour experience, so let's make it a really worthwhile one.'" Talajic is even more candid: "We try to be smart in our choices, and that helps us make something special. We're aware that we can't compete with Naughty Dog in terms of production and costs, so we tried to think of concepts we can do that are different and work with the budgets that we have, and the people – we don't have a specialist focused on animating ears."



Lead narrative designer David Mervik

"The grab mechanic is influenced partially by *LittleBigPlanet*, but also *Ico* and a few other games," Talajic says. "What I always enjoyed in *Ico*, *Shadow Of The Colossus* and *LBP* is the simplicity of recreating the feeling of holding objects in the world by just squeezing the trigger. It creates a sense that it's in your hand, almost."

In one section of the demo, we find ourselves yanking a lever next to a secret door. Rather than open the portal, however, the mechanism drops down a stowaway bed – replete with what appear to be leather restraints – from what we thought was an unassuming cupboard. The springy, spongy bed, which distorts under Six's slight weight, allows us to climb up the teetering chest of drawers next to it. Six's little arms and legs scrabble for purchase as we move up the unnervingly elongated piece of furniture, and once at the top, we're able to jump to a neighbouring unit that doesn't quite reach the floor. Descending from this point gets us to the top of a spindly table, upon which is a key. The key, it transpires, isn't for the secret door either, but rather a padlocked door beyond it. We were trying to be too clever, it turns out, and all we needed to do was shove the secret passageway open.

As well as the specific mechanics of accessing hidden passages, Six must also worry about hunger. When the debilitating effects of malnutrition strike, she can no longer climb, run or drag objects, and must find food in order to regain her athleticism. It's not a dynamic state, and there's no meter counting down, but in specific areas the problem will manifest, making progress difficult in the process. Hands clutching stomach, Six groans in pain when the pangs take hold. In the example we tackle, feeding her is a simple matter of finding some nondescript meat at the side of the room, but eating it triggers the arrival of another of the Maw's horrendous occupants.

The Janitor is a disquieting presence, with elongated, searching arms that help him to reach high places and allow him to get about more quickly than he could using only his stubby legs. His face is partially hidden beneath a large hat and some bandages, just a crooked nose emerging from the dressings. As a result, the Janitor is blind, and all the more grotesque for it as he feels his way around the room. He also has a particularly sharp sense of hearing and, unfortunately for Six, seems to hang about in areas riddled with extremely creaky floorboards.

With the Janitor between us and the door in a small room, there is no escape, and his hands close around us. Six falls unconscious. We awake to find ourselves in a cage stacked on top of others containing fellow imprisoned children. The Janitor removes one for some unknown purpose, dragging the cage and its occupant in intermittent bursts across the floor, and we're left to break out of our own confines. Once free, another child's cage allows us to reach a dangling pull-chain switch that operates the exit and we escape. Later on, we must sneak past the sniffing Janitor in a sequence that feels broadly similar to our encounter with the Chef in the Gamescom demo, holding R2 to sneak between cover, though here the Janitor's hands can reach into small areas, and there's the added problem of all those old floorboards. Later still, after a chase sequence through a ventilation system in which fans keep extinguishing the weak flame of Six's cigarette lighter, we use a hall of noisy clocks to distract and confuse our pursuer.

"We wanted our creatures to be designed around their purpose in the Maw," Talajic explains. "The art director and concept artist did a lot of work in early development, doing sketches of various horrible creatures. We iterated quite a lot, but we found a foundation kind of early on – the Janitor's long arms, and stuff like that, were things that we grew fond of immediately. We knew what their role was, so we wanted to exaggerate their design so they would fit with their purpose. If we have a janitor, he obviously needs to get around easily, and be able to reach high shelves. Same with the [portly] chefs – we exaggerate those aspects to make them grotesque."

Despite the horrors, *Little Nightmares* steers away from gore to focus instead on the more unsettling nature of the unknown. When you're caught, the screen fades to black, and you awake close to the last spot you reached, unsure as to whether you died or not. This sense of restraint extends to the volume of enemies in the game, too.

"I remember that when we first started talking about this project, one of the things that we felt was unique was the idea of having fewer enemies, and there being a greater focus on feeling exposed," Talajic says. "That felt different to most horror, which tends to be action-oriented. But then a short while later *Alien Isolation* was announced, and was doing similar things!"

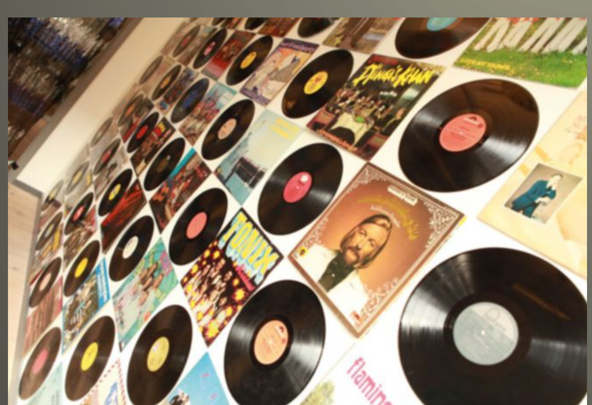
The sense of surreal dislocation and exposure is heightened by the absence of any dialogue in the game. Enemies grunt, breathe heavily and squeal disconcertingly when alerted to your presence. The nervous, apparently friendly pointy-hatted creatures you encounter in some rooms simply scuttle away in silence. And Six never utters a word, instead letting out little noises of exertion when climbing, running, or dragging a heavy suitcase across the floor. The game is constructed, lead narrative designer **David Mervik** tells us, to keep players at a distance, underscoring your vulnerability as a child in a place that you don't belong, and whose reasons for existing you don't yet fully understand.

Talajic elaborates: "Early on, we discussed ▶

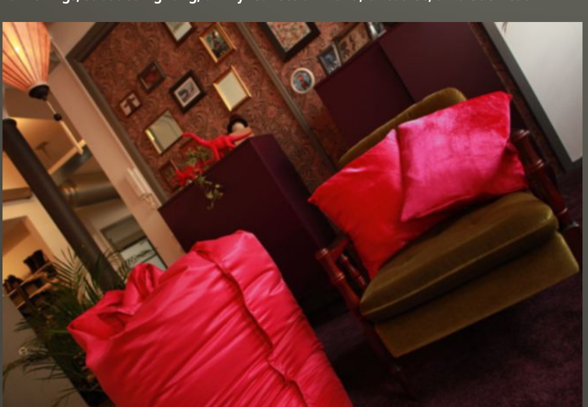








Tarsier Studios' offices feel like a home from home, outfitted as they are with soft furnishings, subdued lighting, a vinyl collection – and, of course, a horse's head



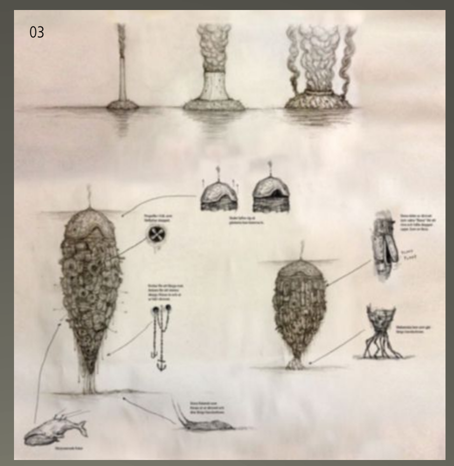
















01 **Little is known about the function of these seemingly benevolent hooded creatures, but they scuttle around most of the areas you explore, disappearing under furniture as you arrive. Well-meaning or otherwise, they can sometimes draw unwanted attention by knocking things over en route.**
02 **The Maw is an ominous, unpleasantly phallic construction that hangs in the water like a rotting jellyfish. Each floor is given over to a different function and you must work your way to the top in order to find a way to escape its dark interior.**
03 **While The Maw looks organic – indeed, it crawls along the sea floor on a clutch of spindly legs – it also features vents, propellers and an anchor or two. It also drags a fishing net behind it and spews out polluting exhaust as it goes.**
04 **Studio Ghibli's influence is especially clear in this image, the Janitor's awful, searching arms resembling those of Kamaji from Spirited Away. While blind, his sharp ear makes him a threat.**
05 **As with everything in The Maw, the Janitor's clothes and bandages are caked in grime and perishing from old age**



whether to go with dialogue or not, and we settled on no dialogue very quickly. I guess *Dead Space* is a good example of why: in the first game the main character never spoke, which made you feel more like you were in his head as you projected your own thoughts and emotions onto him. But in the sequel the character got a voice and a personality, and all of a sudden he was telling *you* how to feel – and he was always kind of macho and cool, which then made you feel less scared and involved."

Six may be intended to be a cipher – despite our assumptions that Six is a girl, Tarsier isn't particularly interested in pinning down a gender – but is no less charismatic as a result. The skinny kid is also far from a macho presence, but despite the character's diminutive form, comes across as capable and headstrong. This mix of naive bravery and physical fragility amps up the sense of danger you feel as you navigate the Maw's dark corridors. But, as in *Limbo* and *Inside*, it also puts you a little off balance as you mentally run the numbers on what potential harm could come to a child.

"My personal feeling is that I'm bored of butch men in games," Mervik says. "I think that was done a long time ago. If you're a kid, those gender roles just don't matter. You're having fun, climbing trees and stuff – you're just being kids. Six is a very, very cool character – just very capable, doing what kids do. If we'd put some dude in there, even if he didn't have any weapons, you wouldn't have the same sense of trepidation about what's going to happen. Whereas when you've got this kid in there, you start connecting back to when *you* were a kid and how surreal and extreme everything felt. Just by having a child character in the game, people start thinking about it in a different way."

"Whether it's a boy or a girl isn't important at all," Talajic adds. "But it would have been weird if we'd had a cool guy running around and jumping to grab door handles [laughs]."

According to Talajic, Six had gravitas even at the earliest stages of the game's development. "In the beginning, we worked on an idea that was *Hunger*, but in 2D," he explains. "We didn't really get anywhere with that, but later we picked it up again really briefly – for a couple of weeks – and developed a prototype using Unity. Back then, Six was just a triangle walking around. It was surprisingly effective, but then somebody made it yellow and it somehow felt 100 per cent better. Suddenly, we could see Six running around."

Just as enigmatic is the Maw. In profile, it looks like a giant underwater beehive constructed from a conglomeration of tar and discarded ▶

MOLECULAR BONDING

After *Metronome*, Tarsier switched its attention to creating costumes, objects and decorations for Media Molecule's *LittleBigPlanet* series – including the second game's DC Comics Pack – and established a relationship that would continue through to the Sumo-created third game. It also worked with Double Eleven to develop *LittleBigPlanet Vita* ("It's surprisingly hard to type '*Little Nightmares*' after working for eight years on *LittleBigPlanet*," Larsson says) and directly with Media Molecule on *Tearaway Unfolded*. Back in 2009, the studio produced a tech demo for Ageia called Desert Diner, which was created to showcase the now Nvidia-owned company's PhysX engine. In the same year Tarsier cemented its relationship with Sony Interactive Entertainment (then Sony Computer Entertainment) when it built a PSN version of Mark Healey's physics brawler *Rag Doll Kung Fu*, subtitled *Fists Of Plastic*.

"THAT'S SOMETHING WE TRIED TO ADD – EACH ROOM SHOULD HAVE A DISTINCT ATMOSPHERIC TONE"



Six's lighter is essential for illuminating the gloomy corners of The Maw. It will react to airflow, however, and fans will extinguish it

submarine parts. It appears to be some kind of macabre factory, a single chimney on its exposed top belching out thick black smoke from within. "I thought of it as a place where I would throw everything I hated and imagined what that would become if it evolved over centuries," Mervik says. Inside, each floor is dedicated to a different function, including, as we saw so memorably at Gamescom, the abattoir-like kitchens. The Maw's oppressive atmosphere is also bolstered by some unsettling sound design.

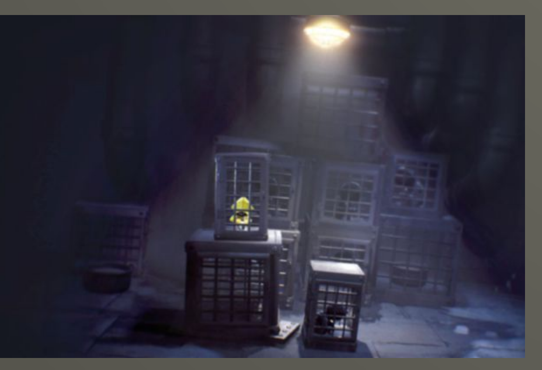
"I wanted to have a very claustrophobic feel," says lead audio designer **Tobias Lilja**. "I love the old Lynch film Eraserhead, for example. He uses these weird industrial ambient tones – even when you're indoors you have this drone in the background, and I was really inspired by that. So that's something we tried to add: each room should have a distinct atmospheric tone, which should be a little claustrophobic, but we also have these breathers when you enter a more open space. This is contrasted with the sound of Six's footsteps – those little bare feet against concrete. That tiny, tiny sound against these big industrial sounds is a really interesting contrast to me."





FROM TOP **Lead audio designer Tobias Lilja and producer Henrik Larsson**





Sneaking past considerably more powerful threats is a big part of *Little Nightmares*, and each has its own traits. The frankly horrendous Janitor is blind but will give chase if it hears you. Standing still as the creature sniffs around you is stressful and terrifying. We weren't able to directly help the caged children we found, but perhaps there will be a way

In many ways, that's an apt description of Tarsier's position in the industry. This 45-person team is abandoning the safety of work-for-hire projects to focus on its own intoxicating ideas, and punching above its weight in the process. For all the stagnant air that hangs in its depths, *Little Nightmares* feels fresh and enticing, a bold spin on both the horror and adventure genres whose world will get under your skin in the best way possible.

"We take everything we do seriously," Larsson says. "Right from the start, we got the *Rag Doll Kung Fu: Fists Of Plastic* project because we had similar ideas – we had our own physics-based fighting game planned at the time. And it's not that we've been forced to do work-for-hire, it's just that we found things that we enjoy doing while we've been gaining experience as a game development studio. We put all of our love into the all of the things that we do."

"Hopefully it won't be 'boom' and we're over," Mervik says. "We're trying to be careful. The ambition was only to do one project, put one game out and go independent. But then we're like, 'Oh, but we could make *Statik* as well, you know…' But, coming from other studios, I'm always so impressed by how everyone's so talented here but never happy to just say, 'Oh, this will do, this is good enough,' just because it will make money or get our name out there.

"I think what's really cool is that there's this real integrity to the people that I work with on a daily basis. Everyone here is just: 'We're not doing this unless we do it right.'" ■





AN AUDIENCE WITH…

JASON RUBIN

The head of game development at Oculus on what 2017 holds for virtual reality

By NATHAN BROWN

Between Oculus Rift's astonishing Kickstarter success in 2012 and its official launch last March, the VR conversation was almost entirely technical – one of screen resolutions, framerates and latency; of optimal control systems; of the design and manufacturing of headsets, and of the processing power required to run them. Yet with the first year of consumer VR coming to a close, those problems have been solved, and the question now is how this remarkable technology can best be harnessed by games. Enter **Jason Rubin**, Naughty Dog co-founder, former THQ president and, today, head of content at Oculus, where he is charged with defining the software strategy for the company that brought VR back from the grave – and for the VR industry in general. Here, Rubin reflects on the first year of VR, looks ahead to its second, and attempts to chart a course to VR's holodeck endgame.

The first year of consumer VR is behind us now – how do you think it's been, both for Oculus and the VR sector in general?

I think it's going very well. We've been very clear since the beginning that we believed it was going to take a bit of time for VR to become massmarket, but in the last 12 months we've made huge strides where it comes to awareness and to demoing software inside major retailers all over the world, and have launched some unique and interesting software that didn't exist a year ago. If you look at the intention metrics for purchase, when price point and content get to a certain level, they're extremely high for VR. We've established a very good beachhead in the first year of consumer VR. That was an answer to your question for the industry, not Oculus in general. But I think Oculus has driven a lot of that.

That's in part due to the fact you were first out of the gate – but Touch wasn't. As the head of Oculus's software division, how frustrating was it not having the optimal control method available to you when Rift launched?

I don't think it was a negative at all. The devkits that we had for Rift were sent out less than two years ago, and the average large console or PC title takes longer than that to make. So from the standpoint of developers, even though there's been eight months between these two launches, there still hasn't been enough time, really [for it to matter]. In the eight-month window that we're looking at right now, it looks like a launch that didn't happen simultaneously. But as we look back in time, even a few years from now, this was the year VR launched, and from developers' perspective it all happened basically at the same time.

I think the most important thing for us was not getting Touch out day and date, it was getting it *right*. It took a little extra time to get the controllers to a point where we felt they were ready for the consumer, and for the software to get to the point where we have, now, over 50 titles available at launch. So the consumer gets not only really fantastic, best-in-the-business experiences with the hand controllers, but also a significant amount of the highest-quality software to back that up. I think we rolled it out in the right way, and I feel that even more now that I've seen the launch lineup and know what's coming to the store.

When we visited Oculus for E292's cover story, you told us Oculus Studios hadn't had much input into the design of the Rift hardware. Were things different in the making of Touch?

Generally speaking the company was much less software focused when the Rift was in development. We now have a larger, more robust software development group, and we all speak to each other internally, so I'd like to believe that we had an impact! Certainly our software engineers were giving feedback from the developers directly to the hardware team, and there were changes made. We certainly didn't drive the design, but I would like to believe that we did have some input. I think the controller spec that we were first handed was so good that there wasn't that much to add. Really it was just figuring out how to use it that has been our bigger focus.

Touch isn't the only VR motion controller on the market – in fact, Rift is the last of the big three VR players to support motion control. What do you think sets it apart from its competitors?

Touch is very different than anything else that's out there. Ergonomically, it feels better, it's lighter – all of the things you'd want as a consumer. But additionally it delivers hand presence: the ability to point a finger at something, the ability to do a thumbs-up. The ability to make a fist, and do so naturally in a way that, in a few minutes, you're very used to using it, to making shapes ▶





CV

Rubin co-founded Naughty Dog with Andy Gavin in 1986, and during his 18 years at the company oversaw games such as *Crash Bandicoot* and *Jak And Daxter*, selling the studio to Sony in 2001. After quitting Naughty Dog he spent a few years away from the game industry, setting up investment fund Morgan Rose and creating a mashup tool that was sold to Fox and folded into MySpace within a week of going live. He returned to games in 2012 as president of struggling THQ, but arrived too late to turn things around for a company whose stock had plunged by 98 per cent. It filed for bankruptcy before the year was out. He joined Oculus in 2014 and was quickly promoted to head of content, where he leads firstparty development, the Oculus Store, and developer and publisher relations.

and gestures with your hands that would be arbitrary on any other system... You could certainly adopt the buttons on another controller to make a fist; you could do it with a gamepad, but it wouldn't feel like you were creating a fist. It'd feel like you were hitting a button that generates a fist from your character. There's a hand presence that is only available through Touch that is incredibly compelling to the user, and that developers have started to use to do natural motions within games.

For example, in *Wilson's Heart*, you turn on the lights by pointing a finger and hitting a switch. It doesn't sound like genius, because you do it in everyday life, but it's something you've never been able to do in a game so naturally before. To map a button to create a pointy finger and then hit a switch will always feel like a disjointed, kind of hacked-together version of reality. Touch provides the *real* reality of just pointing your finger and clicking the switch. From that flows improvement to every interaction that we do with Touch over other hand controllers that are out there.

So is it an essential component of the Rift experience or simply an extension of it?

It's actually both! But I think the vast majority of Rift users will acquire Touch going forward. It will be a key part of the experience.

Touch comes with a second sensor, meaning it also enables you to offer room-scale VR. Do you think that's the ultimate goal of VR, or just one path?

It's one possible path. We also support a three-camera setup, which is an even bigger space. There's also a four-camera setup that developers have access to which makes the space even larger. But there's a logical limit to how large a space a human being can donate to VR in their day-to-day lives. I've been very successful in life and am lucky to have quite a large home, but I don't have a VR room – and I'm in the business. I think the number of people that will have a large room to dedicate to VR, at least in the foreseeable future, is relatively small. So I believe a two-metre-by-two-metre or three-metre-by-three-metre space – maybe clear a coffee table or push back from your desk – is probably the most likely play space for VR in the near future.

We showcased inside-out tracking technology at Oculus Connect 3. That, theoretically, will allow you to have an arena-sized VR experience. Clearly the vast majority of people cannot afford to have an arena-sized VR experience! And there are challenges with coffee tables, and I have dogs that run in front of me when I'm playing VR; I have a three-and-a-half-year-old daughter. It is possible for VR to become *world*-scale. I think in the long run that's not the likely outcome because there's a lot of us on the planet, we live in cities and pay expensive rent and don't have a lot of room to dedicate to VR, but VR does need a little freedom to move around, and we provide that freedom now with our various setups.

From technical concerns of latency and sickness, to logistical issues with manufacturing and shipping, to questions of input prior to Touch's belated release, it feels like there's always been some kind of hurdle in Oculus's way. Are those days over now?

I divide the answer to that into two halves. The first half is things that are not directly related to VR, like shipping. Oculus is a four-year-old company that started as a startup funded through Kickstarter. The fact that a few years later we put thousands of units of never-before-seen technology into people's hands and had a month-long delay on shipping, I think, is understandable. And those are challenges that are faced by almost every company. I think the vast majority of those problems are behind us. Not only have we become more rigorous as a company, but we have Facebook's backing now, and Facebook is a *very* rigorous company. Those issues are not part of our future.

With regards to the challenges of VR, the reason I'm in this business is the joy of overcoming these challenges. We've all envisioned the holodeck, OK? We all imagine being able to step out into a virtual world, completely unencumbered, and being able to walk for miles and interact with artificially created beings. We have hand tracking today, but we don't know where your waist is, we don't know where your legs are. We can't trick your inner ear yet. We don't have smell, we don't have taste, we don't have haptic feedback in your hand. If you get punched by a virtual alien, you don't feel it in your face.

You could call those challenges, and make them a negative. I look at them as an opportunity. I think the whole company's excited that we're slowly surmounting these things. Who, a few years ago, would have thought that we could put something on your head and make you believe that you're at the edge of a building and you can't step off it? Who would have thought we could trick your eyes? Anyone who says, you know, "There's a screen-door effect – I can tell that it's a screen" – it's as if these people have not watched the last couple of decades of technology. These things *will* be overcome. We will achieve better and better visual fidelity, better and better input fidelity. That is the joy of being on this journey. If you look at what's happened over just the past few years, I think we've been cutting away at those challenges pretty darn quickly.

But it's on you, as head of Oculus Studios, to map out the order in which these things are tackled. If we say the endgame is stepping out onto a holodeck and getting tangibly punched in the face by an alien, how

"IF YOU LOOK AT JUST THE PAST FEW YEARS, WE'VE BEEN CUTTING AWAY AT THOSE CHALLENGES PRETTY DARN QUICKLY"



Wilson's Heart, a Rift exclusive from Twisted Pixel, is an exemplar of what Touch's hand presence can offer

do you chart that course? How do you break this infinite possibility space down into a series of strategically manageable steps?

One step at a time! I started developing videogames in 1985. We didn't have the colour yellow on the Apple II, which I started working on. So we had to fake yellow by doing a line of red and a line of green – don't ask me why this works, but red-green-red-green makes a really ugly yellow – and that's what our deserts were drawn with. How are you going to make the game you want to make? I don't know, but I'm going to take a step forward. Then we kept stepping forward, and eventually there was 3D. They said, "You can't make a character action game in 3D! It's not real 3D, it's a 3D polygon on a 2D screen – people won't be able to judge how far they're jumping". Well, guess what, we made *Crash Bandicoot*, and Miyamoto made *Mario 64*, and somebody else solved some other problem, and somebody else solved some other problem.

Developers just *do*. Every time a developer solves a problem, every other developer says, "Good on you – I'm gonna steal that from you and put it in my next game". It's not just games – this is technology in general: we keep taking steps forward. Somebody creates something, and somebody else takes a step on top of that person's shoulders, and one step at a time, things keep getting better. Without the cellphone, we wouldn't have the screens for the Rift. Without the cellphone, we wouldn't have the chips that do rotational tracking. Without 3D printing, we wouldn't have been able to do the design of the Rift so quickly. Without the industrial processes that people have created, we wouldn't have been able to make the headset as we did. By stepping on very small steps of slowly improving technology, suddenly the Rift exists. Stepping on little bits of technological invention from developers, the software just keeps getting better. I don't have to worry about how we solve the holodeck. I just have to worry about how we're going to put the next bunch of games out, and then once they're out, I'll look at everything that's been done by all these brilliant developers and we'll say, "Great, let's combine that and take another step". We'll get there.

Sony has persuaded larger publishers to at least dip a toe in VR. In doing so it has big names on board – *Star Wars*, *Batman*, *Tomb Raider* and so on. Oculus, however, has been more reliant on indie developers. Do you want, or need, the support of big studios?

Brands have a huge role in consumer commerce and making people happy. One of the most successful projects that my team financed for the Gear VR is Jurassic World, which uses ILM's incredible dinosaurs. We have Ubisoft supporting Rift, and we have a bunch of other big publishers doing so. I would love to have, as a personal favourite, a Star Wars game on Rift, or a Batman game, or an Avengers game, or a Bond game. There are people who aren't interested in games who would still want to see brands on the platform.

But it's still early going, and I think indies are good, because there's a lot of them – and remember, the more steps that are being taken at the same time, the faster we get to places. Plus, they tend not to have ingrained theories and beliefs built up over the years. They tend to be a little more experimental, and they tend to reach in random directions. It's hard to strap brands to some of that extrapolation, because you never know which one's going to be good, and many more fail than succeed. But I think indies are a vital part of our future, and brands are a vital part of our future, and I'm absolutely convinced over time that the two will both show up in Oculus. Big publishers, small publishers, brands, non-brands – it'll all just work itself out.

I do fear, as a funder of content, that when you strap a beloved brand to a product, sometimes it falls short of expectations because there's such a pent-up love of, and expectation of, the brand. If you put an indie title out there without a brand on it and people fall in love with it, you could take the exact same title and throw a brand on it and it wouldn't meet people's expectations. There's a careful balance that we have to consider as we talk ▶



about brands, but they will absolutely be a big part of VR, as will indies, in the long run. I sure hope indies will be there for the long run because they're very creative.

Does the knowledge that players are becoming more accustomed to VR – gaining their 'VR legs', as some people put it – mean that you can change the kind of games you make?

First of all, there's a debate about whether 'VR legs' even exists. I think it does and it doesn't. I think there are people who can train themselves to feel better over time, in the same way you could go out on fishing boats every day and probably get used to the motion. There are other people, I believe, who for whatever reason are not going to change the way they feel. The most important thing from Oculus's perspective is that we've created a bunch of titles on Rift in which 99.9 per cent of the population are completely and utterly comfortable. There's a huge range of things we can do. It's not a restrictive subset: we can create a massive amount of content, both interactive and non-interactive, that takes advantage of that.

When it comes to the titles that do have the potential to make people feel uncomfortable, from Oculus's standpoint that's a subset of the total market. We tend to focus on comfort, but we have also become very aware that there are people that actively seek out the more aggressive experiences. Our metrics tell us that 'rollercoaster' is one of the most searched-for terms when it comes to VR simulations. People are pretty aware that rollercoasters, on average, are going to be the wrong thing to do if you have discomfort. But they do like experimenting. They like playing with it. We're open to a wide range of content, but Oculus itself is focused on the broadest possible marketplace, so we tend to focus our efforts on the more comfortable end of the spectrum.

We've reflected on the year just gone, and we've done some holodeck-style future gazing, but what are your immediate hopes for 2017, the second year of consumer VR?

There are a few developers that are now releasing their second generation of titles. And those tend to be some of the best titles, because they've already learned not only what to do, but what *not* to do. They're starting to get the feeling of what works in VR, and they will continue, as they go forward, to get a better and better feeling of that. It takes a while with a new developer who's never worked in VR, either for them to bumble through making that discovery, or for us to sit down with them and have long conversations about what we know. We don't know enough to really give them a clear guide; we kind of talk around what we've found works and doesn't work. But the second-generation developers are now becoming third-gen developers. Those are the developers that are really pushing the limits, saying, "Halfway through the first title I did, I realised that I was missing something. I couldn't change the game design halfway through, but now that I'm done, I'm going to do what I should have done in the first place". As we move forward, I think those developers are going to start teaching us, really, where the possibilities lie in VR. That second-gen software is really going to be what sets the tone for what you'll see in the future.

"I THINK THAT MOMENT COMES FOR VR SOME TIME IN 2017 OR 2018. THAT'S THE MOMENT AT WHICH THINGS CLICK"

Historically, this has precedent. PlayStation, N64 and Saturn were the first systems that allowed you to do 3D at scale, except for a few arcade games that had come before. The first generation of games that came out for launch? They were great games, and I spent a lot of time on them. But they weren't as polished and as nuanced as the second generation, which came a year after the launch of PlayStation. If you ask someone who had a PlayStation what games they played, they'll remember *Crash Bandicoot*, which I worked on. They'll remember *Tomb Raider*, which I worked on. They'll remember *Gran Turismo*. These are the games that defined 3D gaming, and they were all second-generation titles.

So I think that moment comes for VR some time in 2017 or 2018. That's the moment at which things click. That's not to say we don't have an amazing launch lineup, that people won't have an incredible time. I was a day-one PlayStation owner and played the hell out of it before any of those games came out. But that moment when those games came out, that was when everything clicked. 3D gaming just *ran*. I think we're going to have a similar moment [with VR] in the near future. ■



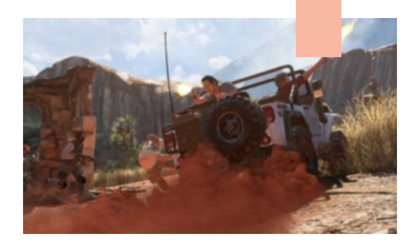

THE EDGE
AWARDS

Yes, 2016 was a hell of a year, but at least in terms of videogames we can say it in the positive sense. The world at large may not look back on the past 12 months with much fondness, yet those of us who were playing games will debate where it sits among the list of the greatest of all time.

It's certainly up there, if only for the way that 2016 saw so many dreams come true. It was the year VR games finally arrived in the home, backed by some of the biggest technology companies on the planet. Tetsuya Mizuguchi finally got to realise *Rez* the way he'd always pictured it in his head. Square Enix managed to ship *Final Fantasy XV*. Bethesda got its long-in-development *Doom* reboot out of the door. And, heavens above, we will no longer get to ask Shuhei Yoshida what's going on with *The Last Guardian* when we see him at E3, because it's finally here. All have been successes, to varying extents.

There have been bumps in the road, but the delays are getting shorter, the controversies no longer quite so scandalous, the disappointments not nearly so crushing. This was the year the console generation really got into its groove, and perhaps it's just as well. Just three years in, the generation is about to change; PS4 Pro and PSVR are already here, posing new headaches to developers who were just starting to feel comfortable. This time next year we'll have Switch and Scorpio, too. It feels like little coincidence that a year of relative stability has also been one of greatness. We'll take some of that outside of games, too, please.

PLAYSTATION GAME OF THE YEAR



RUNNER-UP

UNCHARTED 4

Developer Naughty Dog **Publisher** SIE **Format** PS4

The pace may dip at times, but Naughty Dog's send-off to Nathan Drake is nonetheless a blockbusting triumph. It's a ripping matinee yarn with a loveable cast, an astonishing technical achievement, and an open, flexible climax to a series that was once chided for funnelling the player down a corridor. Drake will be missed.

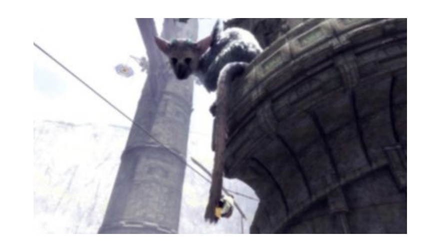


RUNNER-UP

REZ INFINITE

Developer Enhance Games, Monstars **Publisher** Enhance Games **Format** PS4

That a VR remake of a 15-year-old game stood tall at the summit of one of the biggest and best launch lineups in history speaks volumes for *Rez Infinite*'s quality. The remastered campaign was worth the cost of entry alone, but it's the astounding Area X that really sucked us in, and will be talked about for many years to come.



WINNER

THE LAST GUARDIAN

Developer GenDesign, SIE Worldwide **Publisher** SIE **Format** PS4

It took nine years, the monumental scaffold of two ageing classics, and nearly didn't find its way out of development hell at all. But now that *The Last Guardian* has finally emerged, Fumito Ueda's vision is every bit as bold and timeless as we'd hoped, and is unlike anything that has come before.

XBOX GAME OF THE YEAR



RUNNER-UP

GEARS OF WAR 4

Developer The Coalition **Publisher** Microsoft Studios **Format** PC, Xbox One

A suitably muscular comeback as The Coalition takes the baton from Epic Games, even if it reaches back once too often. Long-term fans won't mind: this is a crowd-pleaser of an action game with a clutch of memorable set-pieces and a never-better Horde mode that suggests the inevitable *Gears 5* will be a cracker.

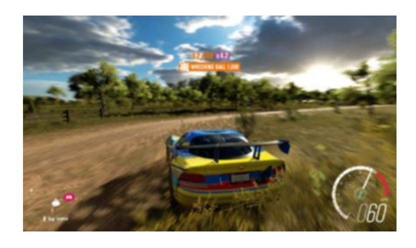


RUNNER-UP

QUANTUM BREAK

Developer Remedy **Publisher** Microsoft Studios **Format** PC, Xbox One

Quantum Break's most powerful moments come during the set-piece temporal stutters that dot its campaign, but there's much to love throughout. The slick, time-distorting combat mechanics are Remedy's best yet, and it sets a new high-water mark for facial animation. Shock: the accompanying TV show wasn't as bad as we expected, either.



WINNER

FORZA HORIZON 3

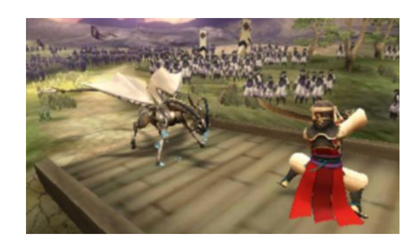
Developer Playground Games **Publisher** Microsoft Studios **Format** PC, Xbox One

Its imported cars – driven on the wrong side of the road – and soundtrack, not to mention liberties taken with matters of geographical accuracy, may have meant *Forza*'s trip to Australia didn't feel very Australian. Regardless, *Horizon 3* was the greatest racer of the year by a lap-and-a-half.

NINTENDO GAME OF THE YEAR







RUNNER-UP

POKÉMON SUN AND MOON

Developer Game Freak **Publisher** The Pokémon Company
Format 3DS

A tropical holiday just as we most needed a break. The sunny archipelago of Alola has its darker corners – particularly if you browse the Pokédex – but offers a cheering reminder of the series' strengths, along with some structural tweaks that amount to the most refined *Pokémon* game to date.

RUNNER-UP

MONSTER HUNTER GENERATIONS

Developer/publisher Capcom
Format 3DS

This celebratory new entry gathers together the best monsters, villages and hunt locations from earlier games, while introducing transformative new fighting styles. The result is at once familiar yet bracingly different, forcing you to relearn favourite weapons and master exhilarating new techniques.

WINNER

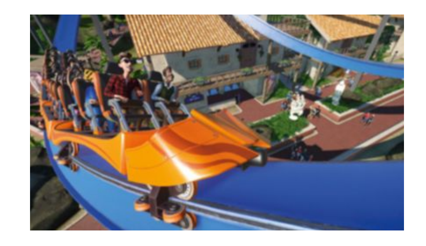
FIRE EMBLEM FATES

Developer Intelligent Systems **Publisher** Nintendo
Format 3DS

The individual games are excellent in their own right, building carefully but wisely upon *Awakening*'s strategic foundations. Considered as a whole, it's even better, a boldly panoramic depiction of war and all its messy ambiguities. Few handheld games are as ambitious and expansive.

PC GAME OF THE YEAR







RUNNER-UP

DEVIL DAGGERS

Developer/publisher Sorath
Format PC

Fifteen seconds; 18; 25 – your survival time creeps up as you tune into *Devil Daggers*' twitch hellscape. It's *Robotron* or *Geometry Wars* from a firstperson perspective, a view that seems profoundly limiting until you realise that its sound design is genius: every threat is there to be heard, and your perception expands accordingly.

RUNNER-UP

PLANET COASTER

Developer/publisher Frontier Developments
Format PC

Planet Coaster's crowds are remarkable. Their expressive, charismatic body language makes it possible to read the ebb and flow of your park's success from way up in the gods without ever having to look at an earnings report. This gut-driven design is echoed in the powerful design tools with which you construct your dream park.

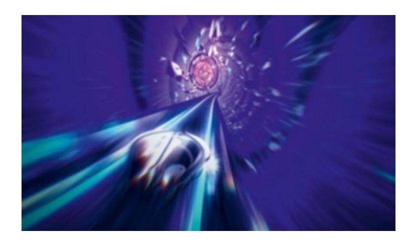
WINNER

STEPHEN'S SAUSAGE ROLL

Developer/publisher Increpare
Format PC

It initially seems utterly obtuse and crude, and even impossible. But persist and invest in its weird but simple rules and you'll uncover one of the most rewarding puzzle games of all time, one which also surprises and inspires, opening a puzzle landscape for you to explore.

VR GAME OF THE YEAR

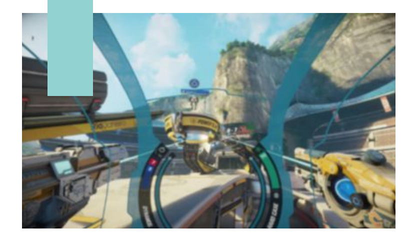


RUNNER-UP

THUMPER

Developer/publisher Drool
Format PC, PS4, PSVR

Rhythm isn't a pleasure in *Thumper*, but a necessity, your sole means of defence against onrushing death. Brooding and oppressive, it flouts not only the stylistic conventions of the music game, but its mechanical ones too, compressing a full suite of inputs down to the D-pad and a single button. A tightly designed, darkly thrilling concept piece.

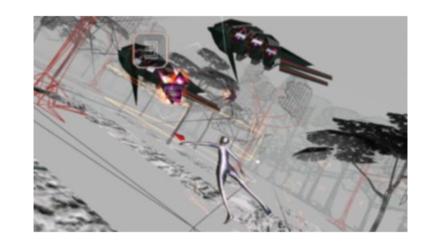


RUNNER-UP

RIGS MECHANISED COMBAT LEAGUE

Developer Guerilla Games Cambridge **Publisher** SIE
Format PSVR

RIGS casually discards the rules of VR game design and hurls players into a fast-moving virtual sport with no sickbag. More than that, the pageantry and sense of place amid its sprawling arenas and roaring crowds is more convincing than any other sports game.



WINNER

REZ INFINITE

Developer Enhance Games, Monstars
Publisher Enhance Games **Format** PS4, PSVR

There can be fewer greater illustrations of the power of virtual reality than the way it makes a game born two console generations ago feel like stepping into the future. Since Palmer Luckey first strapped a mobile phone to his face, devs have obsessed over what VR games should be. It turns out that question was answered 15 years ago.

BEST VISUAL DESIGN

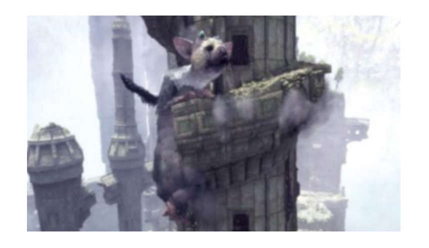


RUNNER-UP

INSIDE

Developer/publisher Playdead
Format PC, PS4, Xbox One

Rarely has a 2D side-scroller conveyed so much depth. Subtle shifts in perspective, and environments of starkly contrasting scale, ensure you rarely feel like you're running from left to right. There's beauty in this haunting world, but Playdead's greater achievement is in enabling a faceless boy to express emotions by the bucketload.



RUNNER-UP

THE LAST GUARDIAN

Developer GenDesign, SIE Worldwide Studios
Publisher SIE **Format** PS4

The Last Guardian reuses many of *Ico*'s tricks, but here they're rendered even more vividly, and with astonishing scale, to provide the backdrop for Trico. In its animation, wind-whipped feathers, and deep black eyes, this incredibly realised creature never seems less than alive.



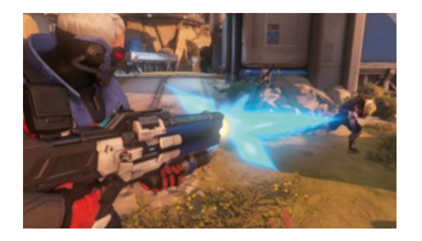
WINNER

UNCHARTED 4

Developer Naughty Dog **Publisher** SIE
Format PS4

Naughty Dog has long been seen as one of the best in the business, but it took PS4 to new heights with Drake's final outing. From animation to environments to physics, this is an arrestingly beautiful game with unshakeable performance that only the Santa Monica-based studio itself looks likely to ever surpass on PS4.

BEST AUDIO DESIGN



RUNNER-UP

OVERWATCH

Developer/publisher Blizzard
Format PC, PS4, Xbox One

"Thanks, love!" While *Overwatch*'s selectable voice lines lend a dollop of personality to the action, the real magic is in the effects work. Amid all the onscreen chaos, clarity is essential, and every threat in the game has a clear, distinct audio cue of some kind that ensures you can keep track of the carnage that surrounds you.

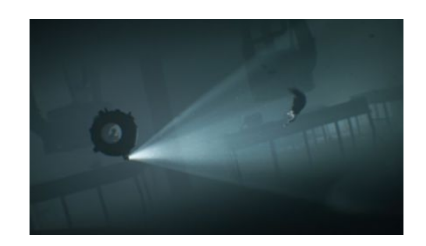


RUNNER-UP

BATTLEFIELD 1

Developer DICE **Publisher** Electronic Arts
Format PC, PS4, Xbox One

That music. *Battlefield 1*'s soundtrack is mournful and extravagant in equal measure, perfectly reflecting the delicately balanced depiction of WWI events with DICE's most enjoyable iteration of the *Battlefield* formula yet. The overwhelming noise of each battle keeps the realities of war in mind, without ever admonishing you for having fun.



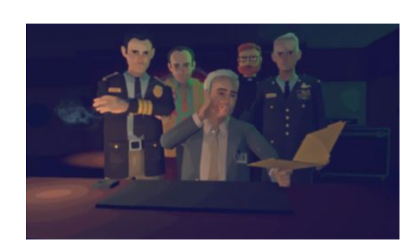
WINNER

INSIDE

Developer/publisher Playdead
Format PC, PS4, Xbox One

Inside is a work by Playdead of apparent sonic austerity that blossoms into life with a decent pair of cans, from the soft pad of a scared boy's footsteps to the barely perceptible shift in its dynamic score or the trepidatious downmix as you head underwater. Subtle, understated and masterful, much like the game as a whole.

BEST STORYTELLING

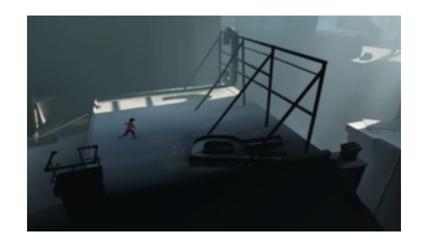


RUNNER-UP

VIRGINIA

Developer Variable State **Publisher** 505 Games
Format PC, PS4, Xbox One

It's often said that creativity thrives most under constraints, and so it proves with the wordless storytelling of Variable State's bewitching debut. Smart editing and expressive character animation more than compensate for the absence of dialogue, with composer Lyndon Holland's score doing much of the emotional heavy lifting.



RUNNER-UP

INSIDE

Developer/publisher Playdead
Format PC, PS4, Xbox One

Without a single spoken word or line of text, *Inside* tells one of the most intriguing tales of the year. Taking the concept of 'less is more' to its logical extreme, the result is not a game whose mysteries are meant to be uncovered, but whose very story is open to discussion. It's a risky endeavour, executed with confident gusto.



WINNER

FIREWATCH

Developer/publisher Campo Santo
Format PC, PS4

While threatening, unexplained events hang over Shoshone National Forest, it's the blossoming, awkward relationship between Delilah and protagonist Henry that drives everything along. Campo Santo handles it with such delicacy that it's easy to forget that the whole thing is draped over a forest's worth of branching conversation trees.

PUBLISHER OF THE YEAR



RUNNER-UP

SQUARE ENIX

Final Fantasy XV, *Dragon Quest Builders* and *I Am Setsuna* were three very different takes on the sandbox action-roleplaying genre that Square Enix knows best; elsewhere it bankrolled *Deus Ex: Mankind Divided* as well as the masterful episodic return of *Hitman*. Few other publishers can lay claim to a lineup of such remarkable, and global, breadth.



RUNNER-UP

BETHESDA

The problem with Bethesda's new review policy – it will no longer provide code to press until the day before launch – is that it inspires needless mistrust in a publisher whose output goes from strength to strength. *Doom*, *Dishonored 2* and *Skyrim: Special Edition* all triumphed in 2016. Perhaps *Dishonored 2*'s reportedly lacklustre sales will prompt a rethink.



WINNER

SONY

Sony draws understandable flak for heading to shows such as E3 and focusing on games that are far away from release. It did it again in 2016, but also put together an excellent launch lineup for PlayStation VR, ensured PS4 Pro was supported on day one, and shipped two of the games of the year in *Uncharted 4* and *The Last Guardian*. The picture looks bright for 2017, too.

STUDIO OF THE YEAR



RUNNER-UP

PLAYDEAD

The story of *Inside*'s development can't have been a smooth one: it was some six years in the making, and soon after it shipped, Playdead's co-founder quit. For all the turbulence, this young studio put out a work of tremendous confidence, a triumphant *Limbo* follow-up that was a cat-beast's whisker from being named game of the year. We're hoping game three emerges quicker.



RUNNER-UP

GENDESIGN

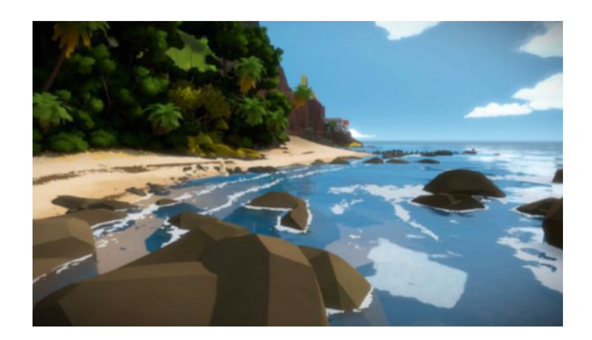
GenDesign was formed when Team Ico felt the need to put a little distance between itself and Sony (for reasons Ueda is not yet ready to disclose), and began life working on one of the most anticipated, and troubled, projects ever undertaken. Against the odds, and despite enormous pressure, this little studio has delivered – with no small amount of help from Sony – on its singular vision.



WINNER

BLIZZARD

After *Hearthstone*'s stellar success, Blizzard might have been forgiven for resting on its laurels. Instead it made a spectacular team shooter in *Overwatch*, launched the best *WOW* expansion in years, further cemented *Hearthstone*'s status as the best digital card game around, and even found time to keep up support for *Diablo III*. The busiest studio on the planet is also among its very best.



FIVE

THE WITNESS

Developer/publisher Thekla, Inc
Format PC, PS4

It's everywhere you look. Every component, every surface of Thekla, Inc's beguiling island has significance, and has been placed with unprecedented deliberation. Few, if any, games are so multifaceted, or unfurl to such a degree, surprising you each time you reach what appears to be the end of one rabbit hole, only to discover a line of enquiry that runs even deeper. Even on its most superficial level, in the hundreds of line-drawing puzzles that decorate the island, Thekla wrings astonishing variety from its core idea. While initially just labyrinthian, point-to-point navigation, an assortment of ostensibly simple rules complicate conundrums to the point that they initially seem impossible. Gradually, the environment around you becomes an increasingly important consideration in solutions, too, before the idea extends much further than you imagine it ever could, enveloping the entire game in the process. To regard *The Witness* as too difficult, or too obtuse, is to miss the point entirely: this is a game that truly believes in the player, and actively seeks to draw out the best in them.

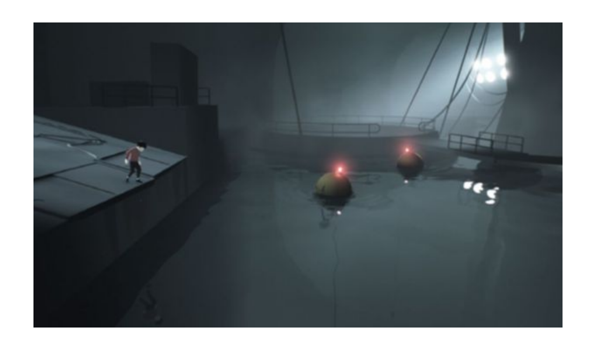


FOUR

OVERWATCH

Developer/publisher Blizzard
Format PC, PS4, Xbox One

Overwatch has no right to be as good as it is. Emerging from the wreckage of *Titan*, Blizzard's long-in-development, eventually cancelled successor to *World Of Warcraft*, it was transformed from MMO to team shooter and somehow emerged almost perfectly formed. Its motley crew of heroes – a gunslinger, a rollerblading DJ, a gorilla in a spacesuit, and so on – somehow combine to form a coherent whole. Its action is fast-paced and chaotic, but legible and deeply tactical. Every character can feel overpowered in certain situations, and yet balance changes have been remarkably few. Somewhere in that complex morass of heroes and abilities lies a counter to everything, and finding it is simply a matter of experimenting. The game has grown, with new maps, modes, heroes and themed events. All have been free, reflecting Blizzard's positive attitude towards its community, but also feeling like something of a statement, a commentary on the state of the modern shooter from a studio that has never made one before. A success on every level.

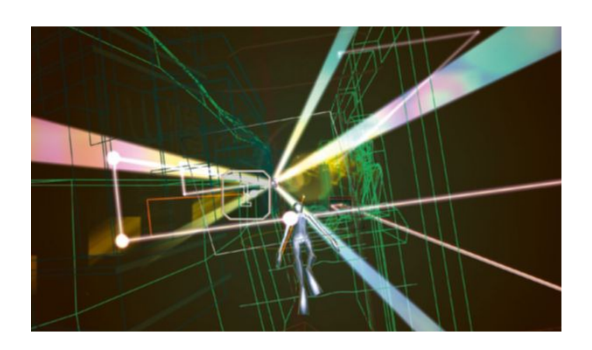


THREE

INSIDE

Developer/publisher Playdead
Format PC, PS4, Xbox One

It's not necessarily pitched as such, but Playdead's long-gestating follow-up to *Limbo* is the smartest and most frightening horror game of the past few years, a purgatorial nightmare that exerts a ferocious grip, even as its stiflingly oppressive atmosphere threatens to overwhelm you. *Inside* is, unquestionably, the better of the Copenhagen studio's two games, lacking *Limbo*'s tendency towards cruel tricks and hollow jolts. Instead, it offers a more insidious, unsettling slow burn of mounting dread, spacing out surprises that are executed with Hitchcockian precision. Its sound design is exceptional, from ominous bassy rumblings to the piercing barks of chasing dogs, each echoing yap raising your heart rate a little higher. And, at least until *The Last Guardian* came along, it boasted the year's most mesmeric climax – a macabre twist leading to an exhilarating escape sequence that's just as ghoulishly funny as it is horrifying. Many videogames offer glimpses of dystopian futures; perhaps *Inside*'s greatest achievement is that its own feels electrifyingly unique.

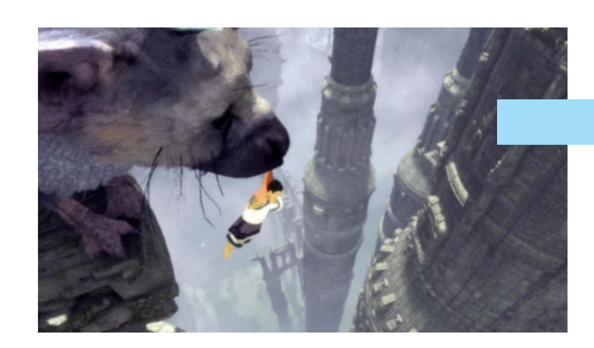


TWO

REZ INFINITE

Developer Enhance Games, Monstars **Publisher** Enhance Games
Format PSVR

As players, we talk a lot about how videogames feel, about the simple, tactile pleasure of moving a character through a world. But only rarely do we discuss how they make *us* feel. There is joy in *Rez Infinite*'s mechanics, certainly – head-tracked aiming makes this the most intuitive incarnation of Tetsuya Mizuguchi's seminal musical shooter to date. But this game is remarkable not for what it lets you do, but for what it does to you. A single playthrough of the opening level is enough to convince the most resolute doubter of the merits of virtual reality. However, as perfectly suited as *Rez*'s 15-year-old campaign is to VR, it is Mizuguchi's 2016 creation, Area X, that cements *Infinite*'s place in this list. Yes, there are mechanical and technical additions to the formula, but its real magic is alchemical, mystical, almost spiritual, a shuddering body high that has reduced many to tears, and had many others call it life-changing. The search for synaesthesia has defined a good part of Mizuguchi's career; in virtual reality, he has found it, to astonishing effect.



ONE

THE LAST GUARDIAN

Developer GenDesign, SIE Worldwide Studio **Publisher** SIE
Format PS4

For all its size and obvious capability, we've never worried so much about a videogame companion as we have about Trico. We share the wincing pain of every hide-piercing spear, pity its subservience to a corrosive sorcery, and feel a wrench of overwhelming guilt whenever the The Nest's crumbling architecture necessitates separation – Trico's doleful yowls betraying its childlike struggle to understand that, in order to proceed together, occasionally we must part ways.

Perhaps this is how director Fumito Ueda felt as he was bombarded, for the best part of a decade, with a torrent of pressure from *Ico* and *Shadow Of The Colossus* fans eager for more. But while it's clear from the final game that *The Last Guardian* could have done with longer still for a little more polishing, Ueda, along with his GenDesign and Sony teams, have spent their time well.

Trico is a staggering creation, suffused with life and personality – a living weapon whose presence inverts the traditional role of the player and sets up some ingenious puzzles. And in allowing the beast to operate according to its own instincts and will, rather than kowtow immediately to the demands of the player, Ueda has reconfigured the conditions for success in a fascinating way – locomotive skill and puzzle-solving alone aren't enough; now you must learn to empathise with a mythical, often inscrutable, creature too.

All of this takes place in yet another enigmatic corner of Ueda's intoxicating universe, in which a teetering castle built to outlandishly tall specifications occupies a cavernous rock structure. This place's state of disrepair makes its disintegrating walkways precarious, but each peacefully decaying area hints at past grandeur. Navigating this vertiginous space with Trico in tow exposes the game's sometimes finicky controls and obstinate camera, issues that would spoil a lesser creation. It is not nearly enough to disgrace such a towering game.

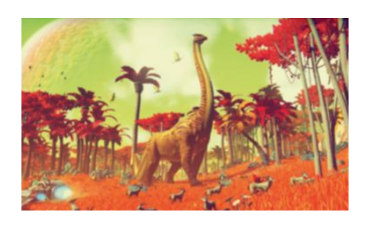
THE ALTERNATIVE EDGE AWARDS

THE PETER MOLYNEUX AWARD

NO MAN'S SKY

Developer Hello Games **Publisher** SIE, Hello Games
Format PS4

Much of the furore around *No Man's Sky*'s supposed feature-light launch was down to it not meeting the wildly fantastical expectations of parts of a passionate community. But a single throwaway comment from Sean Murray that suggested it had a multiplayer component, when it never did, gave legitimacy to any other complaint, no matter how bonkers. Still, if you rinsed it and got a refund, you're the worst.



EGGIEST FACE

KEIJI INAFUNE

Mr Mega Man, ladies and gentlemen, who infamously proclaimed Japan's industry "finished" at GDC in 2011. Inafune has spent the intervening five years making stone-cold classics such as *Yaiba: Ninja Gaiden Z* and *Mighty No 9*. The latter, massively crowdfunded and thrice delayed, limped over the line in the summer and was received dismally. Meanwhile, Japan's game industry as a whole is enjoying an upswing. Whoops.



BEST NOCLIP ADVERTISEMENT

TOM CLANCY'S THE DIVISION

Developer/publisher Ubisoft (Massive)
Format PC, PS4, Xbox One

Many players walked away from this ambitious shooter MMO after bouncing off its miserly endgame. Some failed to even make it that far. Massive's decision to give all player characters solid-body physics meant a queue formed at a mission-critical laptop within minutes of the game's launch. Those prepared to wait may have found themselves blocked again: wags stood in a nearby doorway to stop anyone else from getting through.

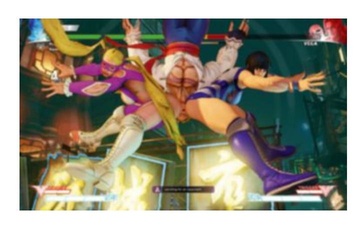


THE BAD DRIVECLUB AWARD

STREET FIGHTER V

Developer/publisher Capcom
Format PC, PS4

December 2015, and in a San Francisco hotel room cuddly *Street Fighter* kingpin Yoshinori Ono is telling us about *Street Fighter V*'s massmarket potential; that Capcom has made a game for hardcore and casuals alike. A few months later he had satisfied neither, dumbing down the high-level side of the game for an audience of newcomers that walked away as soon as they realised there was next to no singleplayer component.

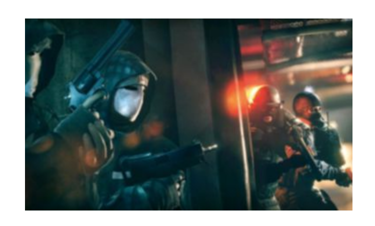


THE GOOD DRIVECLUB AWARD

TOM CLANCY'S RAINBOW SIX: SIEGE

Developer/publisher Ubisoft (Montreal)
Format PC, PS4, Xbox One

Ubisoft's asymmetrical team shooter arrived a little off-kilter back in December 2015. Attacking was fun, but defending much less so. Since launch, Ubisoft has moulded and refined that initial setup – making traps less obvious, and adding more operators and more ways to respond. It's now so moreish that one **Edge** staffer barely finds time for anything else. Not *great* news during deadline week.



LEAST MEANINGFUL EXIT

EA PLAY

"Folks, E3 is over. Why should we, Electronic Arts, one of the world's biggest videogame publishers, continue to cater to the whims of an increasingly critical press, with its scornful hot takes and gurning reaction videos? It's all about community these days, so let's go direct to the fans. But let's do it in Los Angeles, in E3 week, at a venue a five-minute walk away from the main action. Oh, and we'll invite the press, too. That'll learn 'em!"



MOST CONVENIENT RUINS

UNCHARTED 4: A THIEF'S END

Developer Naughty Dog **Publisher** SIE
Format PS4

It must be tricky being a treasure hunter. You head out with nothing but your witty quips, superhuman jump arc and sweet new grappling hook, but who knows if that'll be enough? Luckily for Nathan Drake, someone with the same toolset got to Madagascar first, and was kind enough to affix grapple points near every uncrossable chasm. How did they get those crates onto all those high platforms? Drake owes a pint to whoever did this.



MOST ACCIDENTAL EXERCISE

FINAL FANTASY XV

Developer/publisher Square Enix
Format PS4, Xbox One

Every day is leg day for Prince Noctis Lucis Caelum. Whether chatting to a vendor or collecting dogtags for his good buddy Dave, *FFXV*'s protagonist never misses an opportunity to leap up and down on the spot. Sure, after a decade in development, you'd expect a few moments of outdated design – but in ten years did no one suggest that mapping jump and interact to the same button mightn't be the best idea?



MOST PUNCHABLE ALLY

BATMAN: THE TELLTALE SERIES

Developer/publisher Telltale Games
Format 360, Android, iOS, PC, PS3, PS4, Xbox One

Narrowly beating *Mafia III*'s Thomas Burke – if only because you're able to exact revenge upon that racist thug – is a character who's normally hard to dislike. Telltale, however, managed to turn Bruce Wayne's trusty aide into an intolerable kvetch. When Alfred isn't delivering portentous warnings or bleating lectures, this hired hindrance seems bizarrely keen on reminding poor Bruce of Ma and Pa Wayne's tragic deaths. Thanks for that.

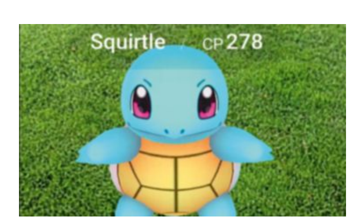


MOST INTENSE AFFAIR

POKÉMON GO

Developer/publisher Niantic
Format Android, iOS

Yes, fine, it wasn't much of a game. And look, we know that Nintendo didn't actually make much money out of it. But who cares? For a few weeks last summer, *Pokémon Go* was absolutely everywhere: every person outdoors looking at their phone prompted the suspicion they were playing it, and more often than not they were. It got people outside and brought them together. Not a long-lasting craze, but a true videogame phenomenon.

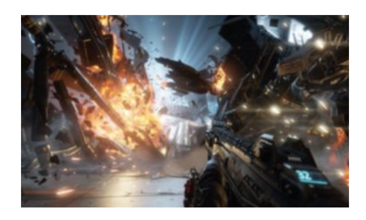


BEST MARIO IMPRESSION

TITANFALL 2

Developer Respawn Entertainment **Publisher** EA
Format PC, PS4, Xbox One

In a fallow year for Nintendo fans, the closest thing you'll find to a breezy, immaculately designed *Mario* game is a sci-fi shooter from the guys who came up with *Medal Of Honor* and *COD*. The skies may be darker and the action more violent, but *Titanfall 2*'s campaign is a tautly paced procession of smart design ideas. The time-switching mission Effect And Cause, where the *Mario* comparison is most apt, is an instant classic.

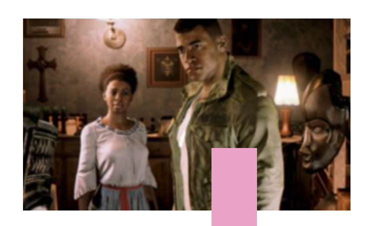


MOST LITERAL SOUNDTRACK

MAFIA III

Developer Hangar 13 **Publisher** 2K Games
Format PC, PS4, Xbox One

Mafia III's soundtrack is one of the all-time greats, but did Hangar 13 really need to use specific songs in such literally connected ways? Creedence's Green River as you head into the bayou; I Fought The Law over an end-of-mission police chase; Son Of A Preacher Man after you meet with a priest you've known since you were a kid. The best moments in open-world games are unscripted – and that applies to their music, too.



COLLECTED WORKS
JEFF MINTER

CENTIPEDE
Developer/publisher dK'Tronics **Format** ZX81 **Release** 1982

GRIDRUNNER
Developer Llamasoft **Publisher** HESware, Quicksilva **Format** Atari 8bit, C64, VIC-20, ZX Spectrum **Release** 1982

HOVER BOVVER
Developer/publisher Llamasoft **Format** Atari 8bit , Commodore 64, Intellivision, PC **Release** 1983

LLAMATRON: 2112
Developer/publisher Llamatron **Format** Amiga, ST, PC **Release** 1991

TEMPEST 2000
Developer Llamasoft **Publisher** Atari, Interplay **Format** Jaguar, PlayStation, PC, Saturn **Release** 1994

TEMPEST 3000
Developer Llamasoft **Publisher** Hasbro Interactive **Format** Nuon **Release** 2000

TXK
Developer/publisher Llamasoft **Format** Vita **Release** 2014

SPACE GIRAFFE
Developer/publisher Llamasoft **Format** 360, PC, Xbox One **Release** 2007

MINOTAUR RESCUE
Developer/publisher Llamasoft **Format** iOS **Release** 2011

POLYBIUS
Developer/publisher Llamasoft **Format** PS4, PSVR **Release** 2017

The laid-back Llamasoft founder reflects on a career of tripped-out games

By Ben Maxwell

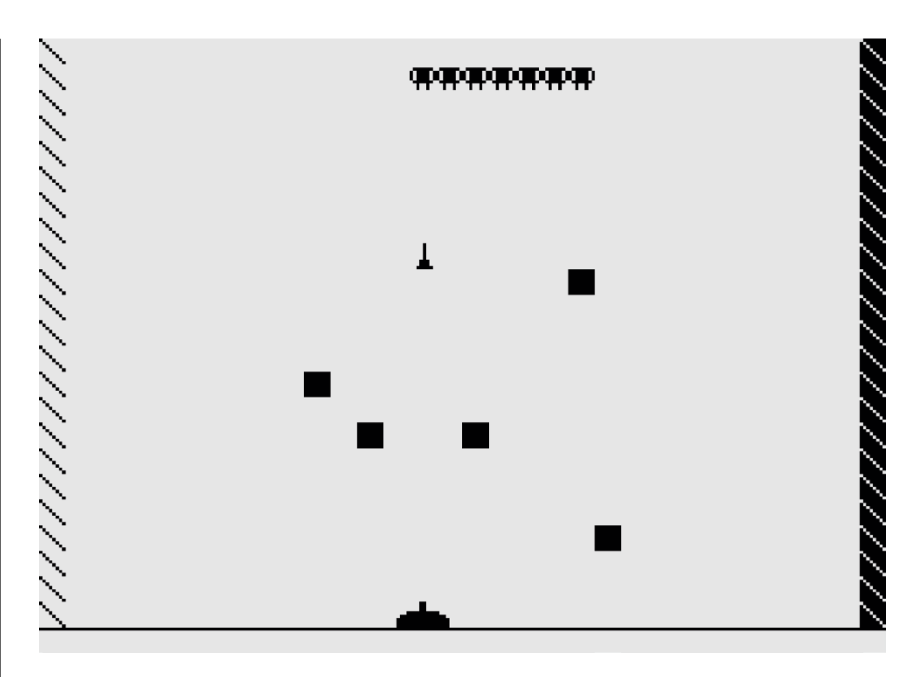
Photography **Will Ireland**



B

ack in 1978, a 16-year-old **Jeff Minter** wandered into a room at his sixth-form college and found a fellow student sitting in front of a device which looked something like a cross between a television and a calculator. On the screen was a crude mass of pixels the person was controlling. Minter had encountered computers in the past, and had already been exposed to a few arcade games by this point, but when he asked how this particular game had found its way into the college device, the boy's answer changed his life: "I typed it in," he replied.

As a result, Minter – who nowadays lives in Wales, where he has a flock of sheep and a variety of other livestock, many of which have made their way into his games – has spent the best part of four decades typing things into computers, carving out a charismatic style that is instantly recognisable. His latest venture, PSVR shooter *Polybius*, represents something of a zenith for his quest to induce a zen state in anyone who plays his games. But we'll start 35 years ago, when Minter was busy dreaming up his own version of Atari's *Centipede*.

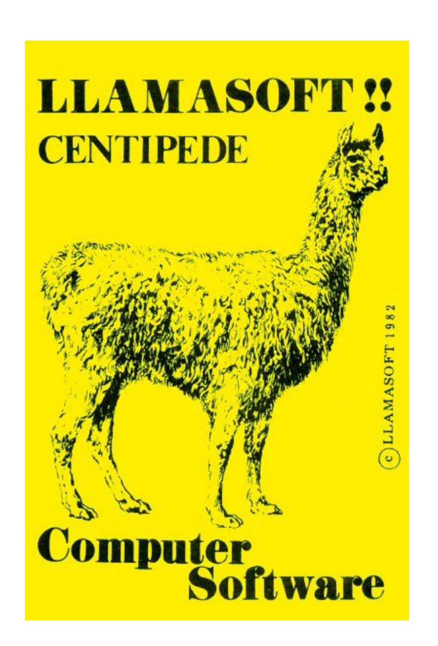


Jeff Minter's version of *Centipede* was based on glimpsing the machine from across a pub, and isn't a faithful recreation as a result. In Minter's take, the player's laser base can't rise from the ground, their are fewer 'mushrooms', and no spiders

CENTIPEDE

Developer/publisher dK'Tronics
Format ZX81 **Release** 1982

"I'd never actually played arcade *Centipede*. I'd seen it from a distance on the other side of a pub, so I knew what the idea was. But I didn't realise that the player craft went up and down, because I hadn't played it. So I just made a *Centipede*-style game on the ZX81. It was the first time that I ever thought there might be some degree of fame attached to making games. I remember I was queuing up to get into one of the ZX Microfairs, and there were these two lads in front of me talking about the games they'd been playing the other night. One of them mentioned playing *Centipede*, and I said, "Do you mean dK'Tronics *Centipede*? Because I made that." And he said, "You must be Jeff Minter!"



Though *Centipede* was originally written for and published by dK'Tronics, a disagreement between Minter and the company's founder eventually saw Llamasoft selling the ZX81 game independently

Looking back on the game now, it's well ropey. It really is quite rough. But at the time, the reviewers seemed to really like it. They liked the presentation I did with the big centipede that waggled its antennas. It was written in hybrid BASIC and assembler – well, machine code, because you didn't have an assembler back then. That's what got me started.

We also did a version for dK'Tronics' Graphics ROM. It was a little ROM that you put in the ZX81 which gave you access

to loads of alternate character sets. But I actually fell out with Dave Heelas, who ran the company, over that. It was also a funny time in my career because dK'Tronics and I fell out quite a lot in the early days – there were a lot of dodgy arrangements going on, and often I seemed to end up on the wrong end of them.

I designed all the graphics for this ROM – five complete sets, all plotted out on graph paper, before working out the hex [values] and handing it in. But then he didn't cut me in with anything at all. He was selling that for £30 for several years, so he must have done all right out of it. In the end we managed to get him to cough up £500, very grudgingly. I just assumed that if I was working with him on something that I would get at least some sliver of it. I did do a version of *Centipede* on that, and a version of *Space Invaders*, actually – which was the only version of *Space Invaders* I've ever done. But it was that kind of stuff that prompted us to start Llamasoft."

GRIDRUNNER

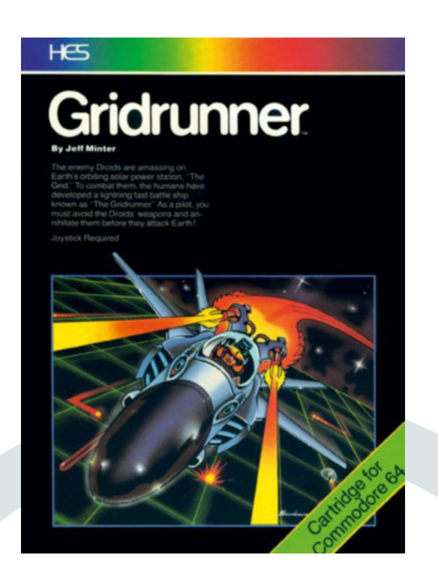
Developer Llamasoft **Publisher** HESware, Quicksilva
Format Atari 8bit, C64, VIC-20, ZX Spectrum **Release** 1982

"*Gridrunner* is when I really started to realise that I'd have a lot more fun if I started trying to put my own stuff in there, rather than just porting things. There were loads and loads of *Centipede* games on the VIC-20 at the time, so while I quite fancied doing a *Centipede*-style game, I didn't want to just make another one. Also, at that time Atari were just starting to throw their weight around and beginning to hassle people. So I started to add things to it – it had the whole thing with the bombs and the cross lasers. But I took some things away, as well – I didn't have as many mushrooms. It worked out really nicely. It was hand-assembled on a VIC-20 and made in a week, start to finish. I started on a Monday morning and finished on the Sunday afternoon – I remember Wednesday night was Basingstoke Computer Club, and I took in a half-finished version to show people at the club! They seemed to quite like it. I had some good times at that club and made some good friends there.

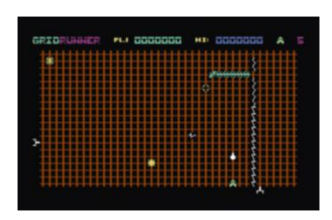
The shop was run by Basil de Ferranti, and he was a lovely guy, but not the most technical bloke in the world. One time I was in the shop and I'd written a little program on the VIC-20 that copied the character set down into RAM, but copied it inverted, and then switched it so that basically the computer was working but all the characters were upside down. I called him over and said, "You might have to send this one back – I think they might have plugged the character-generator chip in upside down!" He was at the point of unplugging it and sending it back when I told him I'd just been messing with his head [laughs].

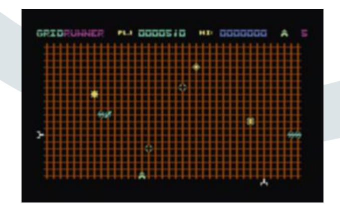
But *Gridrunner* was probably the best week's work I ever did – the game ended up doing really well on cartridge in the US, and it's one of the few times in my career that we actually made some decent money. But money is an annoyance, really – I think the more things are motivated by it, the more shit they tend to be. In a way, I really wish that I could have had one big hit that would give me enough in the background so I wouldn't have to worry about it and scrabble around trying to get money all the time – it pisses me off no end. It gets in the way of being able to do what you want to do. What I do, I do mostly for the love of it. I'm obviously not aiming for the massmarket, because I find that quite boring. I make games that I want to play, and I hope that there will be enough of a market for them to at least fund me to get to the next one.

I don't really want that much money, to be honest with you – there's not a lot I would do with it. I suppose I could buy myself a new car or whatever, but I've got one that works at the moment. I can't really go on massive holidays because I've got the flock to look after. I don't really want many *things* – I'm not really a thing kind of person. All my favourite toys are the ones which I use for development anyway, and I tend to get given those. I just don't like the way money changes ▶



"MONEY IS AN ANNOYANCE – THE MORE THINGS ARE MOTIVATED BY IT, THE MORE SHIT THEY TEND TO BE"





Gridrunner was built on the concept of *Centipede*, but introduced the titular layout, as well as intermittent laser beams

people. If I'd made a game like *Angry Birds*, and ended up with millions and millions of quid, I'd be thinking, 'I can do whatever the fuck I want for the rest of my life!' And I'd be coming up with all sorts of mad stuff. But they're just going, *Angry Birds*, *Angry Birds*, *Angry Birds*... Why? You've got freedom – why just sit in a rut producing the same thing again and again? It's obviously because they're more interested in making money than they are in making games. The way it should be is that you concentrate on making something nice, and then hopefully the money will follow. Rather than concentrate on making money and then hoping your game's all right. I think a lot of places have got it the wrong way round, and I try to keep things what I consider to be the right way around."

HOVER BOVVER

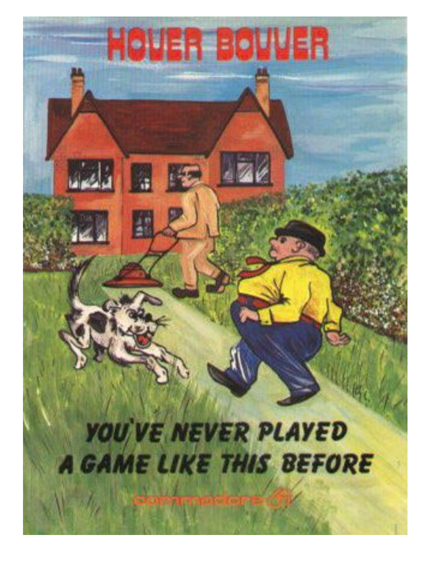
Developer/publisher Llamasoft
Format Atari 8bit , Commodore 64, Intellivision, PC **Release** 1983

"*Hover Bovver* isn't in my usual shoot-'em-up genre, and it was co-designed between me and my dad. We went to a computer show in Birmingham, I think, and we were staying in this quite posh bed-and-breakfast farmhouse in Solihull somewhere. The place had lovely grounds, and one morning we were getting ready to go to the show, having a full English breakfast – I remember the scrambled eggs were glorious – looking out of the window, and there was the groundsman mowing the lawn outside. I remember saying to my dad: "We could make a game about that".

So we started tossing the idea back and forth between the two of us, and all these simple rules – the dog chasing you, borrowing the lawnmover from a neighbour – emerged and sounded like they would come together into a very British, almost Terry & June-style, game. The only thing we couldn't decide straight away was what we should call it. But in the car on the way to the show, I remember hearing one of the old Qualcast adverts where they kept going on about, "It's a lot less bovver than a hover," and so I went, "It's got to be called *Hover Bovver*, really".

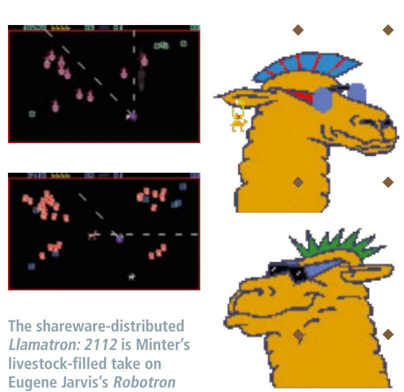
We designed it verbally, and when I got home I turned it into actual code. Those





Hover Bovver is a game of lawnmowing involving various threats, including your neighbour, the mower's owner





The shareware-distributed *Llamatron: 2112* is Minter's livestock-filled take on Eugene Jarvis's *Robotron*

ideas ended up being just as fun in the game as I imagined they would be, but I'm particularly fond of this one because my dad did love his games. I remember getting him into games with my first Atari VCS that I brought home from university. He protested that I was too old to play games, so I gave him the joystick and got him to play *Space Invaders*, and then I didn't get it back for several hours. From that point on he was completely into games for the rest of his life – he'd always have the latest consoles, and my mum used to say she was a computer-game widow. All the family were quite involved with Llamasoft – they all helped out when we did exhibitions and stuff like that. My mum did a lot of the business side of things because she was far better at that than I am – I'm a rubbish businessperson. But it was particularly nice to have my dad actually co-design a game with me."

LLAMATRON: 2112

Developer/publisher Llamasoft
Format Amiga, Atari ST, PC **Release** 1991

"I love *Robotron*, but *Llamatron* illustrates quite nicely the difference between programming for the arcade and programming for the home. *Llamatron looks* like *Robotron*, initially it plays like *Robotron*, too, but it's a lot more gentle. *Robotron*'s job is to kick your arse as quickly as possible, to get you to put another coin in the machine, whereas in *Llamatron* I wanted there to be a bit of a journey, and so there are 100 levels and it's much more lenient. It won't kill you so quickly, it's got loads of powerups, and there's stuff to discover on every level. I mean, I get quite annoyed about stuff like free-to-play, and people will say, "It's only like an arcade game where you have to put in 10p for each go". But I'm not into designing that kind of experience – I don't want to design a game whose main objective is to get you to put money into it constantly. I want to design something that's a nice, well-rounded whole that you'll enjoy sitting down to. I'll make my money, hopefully, when you buy my next game because you liked the first one.

Nobody seemed to be interested in that kind of game at the time, so we

decided to do it as shareware. And this was *proper* shareware where you give the whole game out and you only ask people to pay if they like it. It was a time when we were running out of money, but we had it distributed on the cover of ST Format and we did really well. But that also caused some controversy: some of the software houses didn't like the idea of magazines distributing entire games on the cover disk. They felt threatened by that, because they thought people might not go out and spend money on *their* games. But for me it was a really heartwarming experience – we desperately needed to get some cashflow going. We had people who weren't only sending £5, but also letters saying how much they appreciated it, and how much they enjoyed the game. We even had people sending us more money than we asked for. It was really pure, and I don't think I've ever seen anything like that since."

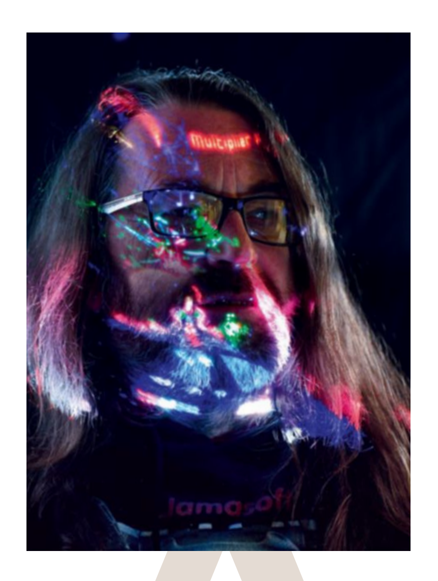
TEMPEST 2000

Developer Llamasoft **Publisher** Atari, Interplay
Format Jaguar, PlayStation, PC, Saturn **Release** 1994

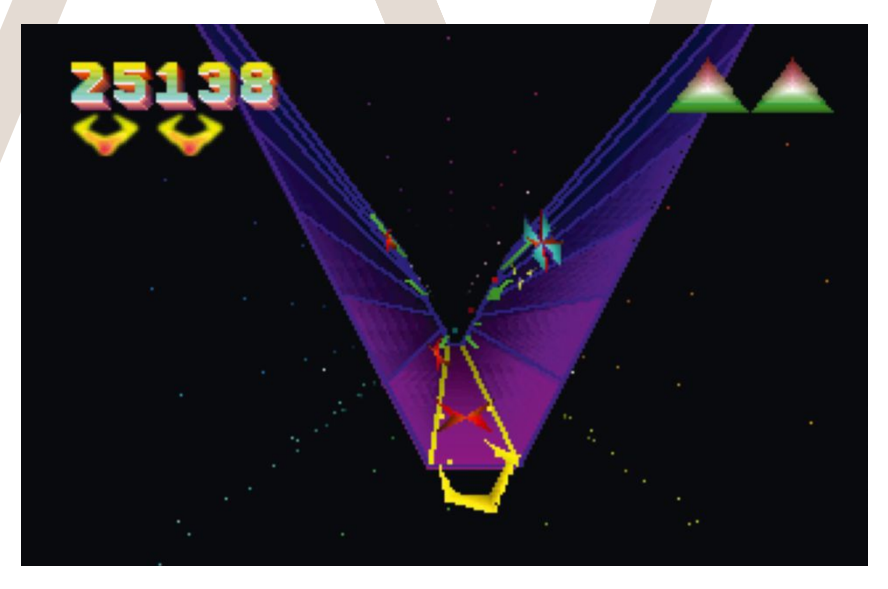
"I'd always loved *Tempest*. The first time I saw it in an arcade, I was just entranced by it. It was just so different-looking, very abstract, and that really fast, shooty gameplay was right up my street. You can see right there the basis for my love of that kind of style that's gone on throughout the years. But getting to do a version surprised me. I was at a Jaguar development convention and wasn't really sure what I was going to do, if anything, on the Jaguar. I'd done some work on the Atari ST in the UK, I'd also worked on the cancelled Panther system briefly, and Atari had published a couple of my games and were interested in showing me the Jaguar. Towards the end of the conference they asked if anybody was interested in doing some conversions of Atari arcade titles, and started calling out game names. When they said "*Tempest*", I was like, "Fucking hell – *yes*". I was a bit scared because I hadn't done any 3D at that point. Everything I'd done had been sprites and tile maps, and I'm not that good at maths. So I was thinking, 'Oh, no, I'm going to have to learn some shit if I'm going to do this'. It was a bit of a struggle at first, but after a couple of months I had a very reasonable version of *Tempest* going. I sent that in, but then I started thinking, 'How am I going to make this my own?' So I started filling in the polygons and added the things that shattered. Actually, I got told off by John Mathieson, the guy that designed the Jaguar, for that. I had a few run-ins with him. The effect was actually running something that was supposed to be used the other way around to try to simulate texture mapping under certain conditions, but it proved quite effective my way.

I discovered another thing at that time, which absolutely blew my mind. I sat down and had my morning spliff, and when I finished it I thought, 'I wonder what happens if I make a sprite be the image of the previous screen?' So I put that onscreen and started to spin it and got all that feedback, and I was like, "Fucking hell! That's amazing!" And so I hooked up the joypad to some of the parameters and sat there the whole day going, "Woah – this is great!" That's lasted me for so many years – I've used it in so many different things.

When the Jaguar launched, I got invited out to New York to go to the launch party, and John was there, too, of course. We'd both been drinking, and he



"IT WAS REALLY PURE, AND I DON'T THINK I'VE EVER SEEN ANYTHING LIKE THAT SINCE"



Tempest 2000 has become synonymous with Atari's Jaguar console, and was widely considered to be one of the few good reasons to invest in the hardware. It was a dream project for Minter, and went on to become one of his most acclaimed titles



While to the uninitiated, many of Minter's games look like Tempest, *TxK* was actually only his third spin on the idea – and, he feels, the ultimate iteration. The psychedelic shooter was a natural fit for Vita, whose OLED screen ensured crisp visuals

came up to me and said, "I've seen *Tempest 2000*. It really doesn't use my machine that well at all, and really, for Atari, it's a makeweight game – nobody thinks that much of it." And so I was like, "Oh, thanks, John". But then, of course, when it came out he had to eat his words! We went on to become good friends after that, and we laughed and laughed about it later on. I think we were both a bit tired and emotional at the time [laughs].

TEMPEST 3000

Developer Llamasoft **Publisher** Hasbro Interactive
Format Nuon **Release** 2000

TXK

Developer/publisher Llamasoft
Platform Vita **Release** 2014

"I was very happy with *2000*, but there were certain things I didn't like about it – the framework could get choppy when it's under load, and these days it looks a bit blocky. I think with *TxK* I'm satisfied that that's pretty much the definitive version – as far as I want to go in that direction. And I also had the opportunity to do *Tempest 3000* on VM Labs' Nuon. That was a fucking challenge, I can tell you. It was a 54Mhz chip, it doesn't have any hardware assist for graphics, and every pixel has got a significant calculation going on. So it's effectively doing the same kind of stuff that you do with a shader these days. The chip has four different processing elements, and you had to program them in parallel. I had three and a half when I first started, but gradually more and more system resources got taken up and so I got shoved off one, and shoved off another until there wasn't a lot left. Each of these CPUs had 4K memory, so you had to page stuff in and out constantly, and it was just a tremendous dance to get anything out of it. When I look at it now, I know that the framerate is too choppy, and the resolution isn't what it should be, but considering the resources I had to do that in, I think I did bloody well."



Few got to experience *Tempest 3000*, a hardware-constrained version for the ill-fated Nuon architecture

"THEY THOUGHT IT WAS THEIR GOD-GIVEN RIGHT TO SEE EVERYTHING IN PERFECT CLARITY"



The visually intense *Space Giraffe* uses code from 360's Neon light synth, which Minter created with Ivan Zorzin

SPACE GIRAFFE

Developer/publisher Llamasoft
Format 360, PC, Xbox One **Release** 2007

"Even though it looked *Tempesty*, there were quite a lot of differences in the gameplay – if you played it like *Tempest*, then you wouldn't do very well. In a way that worked against it, though, and I wish I'd made it look less *Tempesty* because then people might have found it easier to access the new play style. People took a look at the web and thought, "Oh, it's *Tempest*." So I did myself a disservice there. But that game was intended to be the confluence of my particular style of videogames, and the lighting stuff I did – it was built right on top of the Neon engine which we'd just used for making the Xbox 360 music visualiser.

I had the idea that I wanted to use the environment as part of the difficulty, but some people really objected to that. They thought it was their god-given right to see everything in perfect clarity and not have any psychedelic warping going on because that was against the rules. But to me, there were no rules. Part of the skill of the game was learning how to read the stuff. All the cues were still in there: if you look at level 64, the first time you see it, you just think, 'How the *fuck* can anybody see anything in that?' But when you learn it, you can play that level through without losing a life. A lot of cues were moved out to the audio. Yes, it was experimental, but I'm very proud of it, even though it was sharply divisive and quite a lot of people hated it.

I think it's remembered a lot more fondly now, though, and people are

realising that it's actually a bit of a classic of its kind. I think it's far better to make something which causes people to have a strong opinion than it is to create something that's forgotten years later. So I stand by *Space Giraffe*, and I still play it to this day. To play it well you almost have to let your defences down and let all that stuff wash over you, and then you find you've achieved this kind of zen state. I'm always looking for that in the games I design. I want to get players into this kind of trance state because for me that's when gaming feels best – when you're really locked into it and you're in flow."

MINOTAUR RESCUE

Developer/publisher Llamasoft
Format iOS **Release** 2011

"I really thought there might be a way we could survive doing nice, fun little games on mobile devices. There are so many of them out there that, even if software is being hopelessly devalued by the horrible 69p price point, you'd think there would be enough to sustain them. But unfortunately it didn't happen because discoverability is awful on mobile. If I'd been able to charge the same price as my VIC-20 games – a fiver – then I could have happily stayed there doing those games even with the numbers I was getting. But no, the moment you start to put the price up above a quid, people think it's too expensive. I mean, fuck *off*.

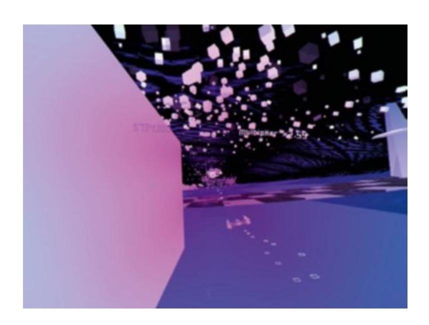
But I'm really proud of the games I made on mobile devices. Each of them was a really nice game, and *Minotaur Rescue* is a little gem. I was fascinated by the idea of how to get good controls out of a touchscreen device, and I ended up getting that to feel pretty nice. People think that I hate mobile gaming per se, but it's not that at all – I just hate the fact that the ecosystem is incredibly toxic to developers. I really enjoyed the short-form development – spending a month making one thing, and then moving on to another thing. I mean, I love *Polybius* but it's been a long slog and has taken me much longer than I hoped it would. So it was quite a joy doing those little games.

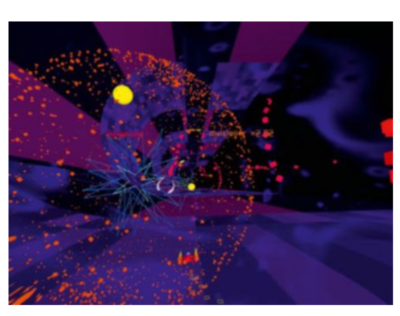
But with each one, I'd release it and hope it would get somewhere, and I'd end up getting 50p back. Then I'd be crushed, and have to build up my enthusiasm again. Then the same thing would happen. All the while I was getting excellent user reviews, and in all the places where you'd think it would be important to get good reviews, like Touch Arcade. But nothing made the slightest bit of difference. After two years of that, I was worn out – I was absolutely emotionally crushed, exhausted, and I was out of money. It actually ended up costing me money to make the games. In a way, that two years was the worst time in my career, I think. I really ended up quite broken up about it.

Then I did *TxK* on Vita, supposedly a niche system, and it's *so* much better than ten games that I've done on this device that's supposedly got billions of users. That's why I don't do mobile."

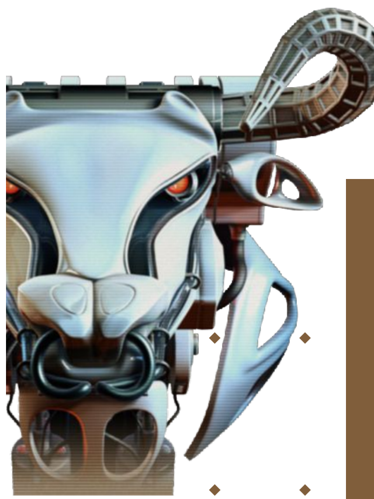


Mintoaur Rescue is an up-to-fourplayer iOS game in which you must rescue, naturally, endangered minotaurs





Polybius feels like the culmination of Minter's quest to induce trance states in players, and is a great fit for PSVR



POLYBIUS

Developer/publisher Llamasoft
Format PS4, PSVR **Release** 2017

"There will be a non-VR version of *Polybius*, but one of the things that I learned with the Oculus Rift version of *TxK* is that it just feels really good being in there. It adds to the experience a lot, so I thought it would really nice to put players inside an arcade game. And, of course, the inspiration was this legend of *Polybius* which was supposed to be this game which put people in trances and did things to their heads. It just seemed to be the obvious theme for it.

We spent ages at the start building the engine, and that's a lot of work. The payoff is that we can do things like 2x oversampling and native 120fps, which most people can't do at the moment. But this time last year we had some of the engine built, but I didn't have any game at all. I thought, 'Fucking hell, I need to sit down and get something down, because if I don't get the game going soon, I'll run out of money again'. So I put together a demo in the space of about a week and started to play that. I put on some Prodigy and started rushing through the gates, and it all felt really good.

While it looks really hairy, we haven't had a single bad reaction to the classic virtual-reality motion sickness. I want to take people to trip-out city, but in a really safe way." ■

THE MAKING OF...



THUMPER

How two former Rock Band developers channelled fear, uncertainty and oppressiveness to create a brand-new type of music game

By Edward Smith

Developer/publisher Drool
Format PC, PS4
Origin US
Release 2016

Harmonix was riding high in 2009. Sales of *Rock Band* and *Rock Band 2* were in the multi-millions and Viacom, the series' publisher, was on its way to becoming one of the largest videogame companies in the United States. Its future was secure, but Harmonix was about to go even further – with the finishing touches being applied to *The Beatles: Rock Band*, its reputation as the predominant creator of music games would, by the end of the year, be cemented.

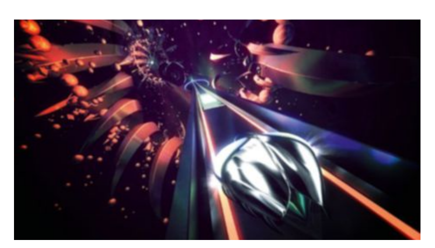
On the verge of its biggest success to date, Harmonix had little time for a strange new prototype created by one of its effects artists, **Brian Gibson**. His short video, showcasing a basic, unfinished-looking rhythm game, had made the rounds internally, but nobody showed much interest. Music games had a formula, and clearly it was working well. With the biggest band in history signed to its label, Harmonix wasn't looking for the niche or obscure.

But Gibson, who in his spare time is one half of noise-rock duo Lightning Bolt, sensed he was onto something. It was far from fully formed – the finished work, he imagined, would look nothing like this prototype. But with the right help, he might be able to fulfil a long-standing ambition: to design and build his own videogame from the ground up.

"The premise was to make a rhythm game that was very simple, where you'd just be doing one thing at a time," Gibson tells us. "And because you were only doing one thing at a time, the game would be more about making you jump out of your seat and making you sweat – all the things I liked about videogames. In my job, I was using only a very specific set of skills. But on the weekends, I enjoyed working on music and environmental design stuff. This game was going to scratch a lot of itches. Harmonix, though, didn't want anything to do with it."

Gibson's prototype eventually made its way to a programmer at Harmonix named **Marc Flury**. He only knew Gibson in passing – the size of the studio meant they'd never worked together on a project directly – and even though he liked what he saw, he was still sceptical.

"I wasn't very excited about it," Flury says. "It looked so simple and I didn't really think it would be any fun. Plus, although I wanted to work on something on my own, after so many years at Harmonix I didn't want to do another rhythm game. My grandest ambition for it originally was to make it for Xbox Live Arcade, probably take a year or two and just get it out there. But we just kept working on it. How ambitious we started to get was a big surprise."



Envisioned as a different type of rhythm game, rather than building up tunes and melodies as they progress, players in *Thumper* must respond, quickly, to an unpredictable beat

When Flury left Harmonix in 2009 to move with his wife to South Korea, he took the prototype with him. Gibson remained at the studio, but now, with the addition of Flury's programming abilities, he began work in earnest on his idea. For each of the developers, the project became an opportunity to pursue career-long aspirations. Gibson wanted to design. Flury, inspired by people such as Chris Hecker, of *Spy Party* fame, and Jonathan Blow, who had recently released *Braid*, planned on creating his very own game engine. And so the development of *Thumper*, rather than an organised, workmanlike process, became a kind of musical jam, with Gibson bouncing ideas off Flury's technology, and Flury building tools to accommodate Gibson's changing vision.

"THE GAME WOULD BE MORE ABOUT MAKING YOU JUMP OUT OF YOUR SEAT AND MAKING YOU SWEAT"

"It was mostly up to Brian to make the levels, including the audio, and I was supporting the tools and making the mechanics," Flury explains. "But we didn't really work in any kind of conventional, videogame-content-pipeline kind of way. The tool we used to make tracks changed many times. The way levels were authored kept changing. It wasn't an efficient process. I didn't know what I was doing and there were huge missteps. Sometimes I'd spend months on something and end up throwing it away. I made a whole system for doing animations and events, but in the finished game we used a different system entirely."

"We started with no engine and no graphics, just doing really foundational experiments," Gibson continues. "If people saw what we were doing they would have said it looked like garbage. But I remember, every step of the way in this project, just being elated. We started by making a graphics engine and working out how to put points in space and have lighting hit them. We made a 3D plane, then divided it up into a grid, then made it so you could move around on the grid. That stuff built exponentially. As we developed technology and made new tools we were able to create things we couldn't have created before. Each of those small steps felt amazing."

Nevertheless, Flury and Gibson, now operating under the studio name Drool, were in new territory. Having worked on both *Rock Band* and *Guitar Hero*, they knew better than anybody that rhythm games, as they were generally accepted, made players feel cool, capable and – most importantly – like they were making music. But *Thumper* was darker. Based on illustrations by a friend named Mat Brinkman, Gibson had envisioned the game to be "oppressive, heavy and dissonant". At the same time, it had to be simple. Where music games previously had involved increasingly complex layers of sound and, particularly in regard to instrument peripherals, convoluted methods of input, *Thumper* would use only a couple of buttons on a standard controller. As well as creating a game engine from scratch, the two members of Drool were trying to forget almost every design lesson they'd ever been taught.

"We had a lot of mini crises about what the game should be," Flury says. "How does the character jump? Do we use an extra button, or what? And it was just the two of us trying to work this out. When you play it, the solutions seem pretty obvious, but at the time they weren't obvious to us. Plus, if you're making an engine from scratch, it needs to do all these things that are very nuts and bolts. It needs to read files from the disk. It needs to allocate memory,

draw triangles, play sounds. It was important to make this game good, but it was over such a long stretch of time that I often felt like I was just building a tool, not building a game. I was burned out sometimes. I was working at maybe 20 per cent efficiency."

By now, the project that Flury had imagined would last only a couple of years was starting to take over both his and Gibson's life. "It didn't feel healthy," Gibson says. "Some people must think we just threw this out after a couple of months of tinkering around, but for a significant portion of my life it *was* my life."

A conceptual shift, however, steered *Thumper* back on track. Previously, Flury had imagined his first ever game engine as an all-purpose tool; something with broad applications, like Unity. But trying to build an engine that could do everything, for everyone, he realised, was unnecessary – the smarter approach was to create tools specifically for *Thumper*, tools that appealed directly to Gibson's experience as a musician. Now, instead of Unity or GameMaker, Flury sought inspiration from music-editing software. Step sequencers, which allow artists to visualise their entire tracks on a grid and add or remove elements on the fly, proved an ideal model.

"Brian was the main user of this engine so it was a process of building a new tool and seeing what ideas it would give him," Flury says. "We didn't lay out the levels in 3D space; we had this timeline with all the different data on it – things like audio and visual cues – and then the game would put them all together. It was very specific to the game we made. Nobody could have made this game without using the tools we built."

The simple mechanics that the duo had envisioned, but nevertheless hesitated over, could now be quickly implemented, tested and – if necessary – iterated or removed in quick succession. Enemies and bosses came and went. An idea involving different, optional tracks, which players could switch onto rather than following the main route, was tried and then scrapped. It required a lot of trial and error, but compared to the uncertain vision put forward in the prototype, *Thumper* was starting to finally take shape.

Music became the game's largest influence. As well as emulating step sequencers for the technology, *Thumper*'s core design was informed – directly and indirectly – by Gibson's experience playing in Lightning Bolt. The band's heavy, overwhelming sound defined *Thumper*'s dark, foreboding mood. The distorted, arrhythmic arrangements inspired the game's stressful, unpredictable gameplay.

"I made a lot of *Thumper*'s music while I was on tour," Gibson explains. "I'd sit at a laptop, with headphones on, and create these loops that I thought sounded good – big drums, grand, dissonant, cosmic sounds. After adding those into the levels, the gameplay would come. It all originated from my own background in music. I enjoy playing off of rhythms and interacting with something simple in complex ways. So the rhythms in *Thumper* would be a beat off, or a beat before. The mood of the game reflected the stress and tension of playing something difficult, and once it was visually oppressive and dark, it all gelled together."

By 2015, *Thumper* was ready to be presented. Gibson had already showed it to a close friend, who, to his surprise, had called it the best game he'd ever played. With that boost of confidence, Drool shopped its game around GDC. Two executives from Sony, Nick Suttner and Shane Battenhausen, expressed an interest in bringing it to PlayStation. There were still many optimisations to be made – less than a year prior to release, Flury was still working on the engine – but *Thumper* had found its groove.

Still, it had been seven long years. Flury had his engine and Gibson had his vision, but it was difficult, at least in the immediate aftermath, to feel anything except relief. Like one of Lightning Bolt's gigs, like a level from *Thumper*, Drool's first experience creating a videogame had been an attack on the senses. For now, the pair could enjoy a very welcome comedown, but in Flury's words, the work had been "messy".

"Music can be meditative, combative, difficult," he says, "and I was interested in having a music game that gave that type of experience. But moving forward, quality of life is going to be a big consideration. I don't want to spend another bunch of years just optimising. This moment I'd stressed about forever is finally over, but it's really hard when you're working like this. The list of problems keeps going. We did everything, the two of us, and so much of it was us just winging it. You can explain this away when you have the finished product – you can give it the 'successplanation' – but a lot of the time it was just all the same, all bound up in one big mess."

"Marc started working on this before he even liked it," Gibson continues. "He maybe thought the idea would turn into something else, and it did, but when I look back at earlier iterations, I'm surprised even I was ever excited about it. A necessary ingredient for finishing a game like this is delusional optimism. You have to be able to see what it might be, even if it might never happen. A lot of self-deception goes into making a game. I was partly confident about it because of Lightning Bolt – I had the experience of doing something more primal and seeing people respond to it. But there was also a part of me that was thinking I'd need to get a job after this was done. I wasn't sleeping well. Only now do I feel normal." ■



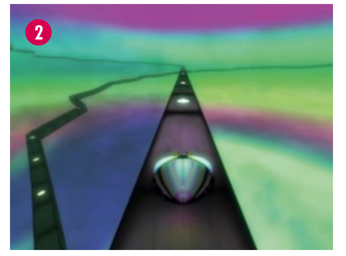
Brian Gibson
Lead designer

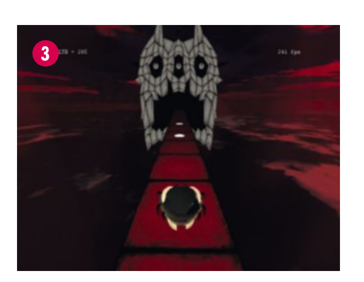
How would you describe the experience of playing *Thumper*?
A lot of people have expectations for rhythm games, that they'll get you into a groove and have this synaesthetic experience. I didn't want this game to be typical. I wanted it to have an element of reaction time and unpredictability. I've seen feedback where people have said, 'This isn't music,' or, 'This isn't a rhythm,' and I don't care. I want it to be a singular experience, not what people expected.

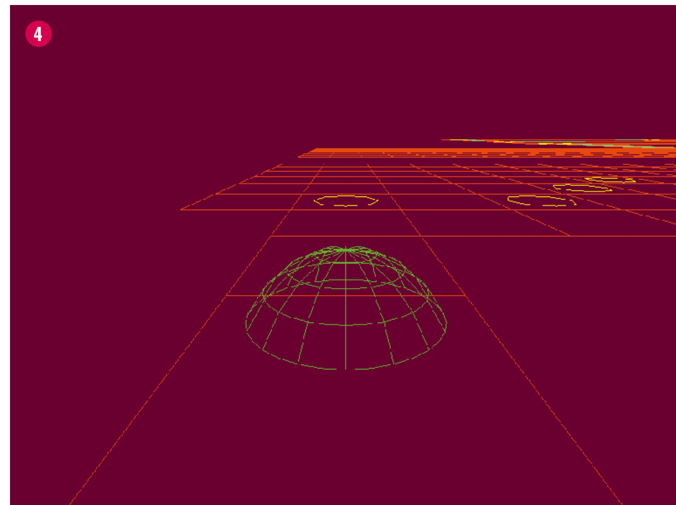
How is *Thumper* informed by your time playing music with Lightning Bolt?
It's a commentary on the experience of being a musician. And it's a reaction to the *Guitar Hero*, *Rock Band* stuff. I think those are examples of an unsavoury way our society thinks about music and being a rock star, like it's a path to gratifying your ego. Music should be something you use to *lose* your ego, to have an experience outside yourself. This idea of rock stars being on stage and the most important people in the world, it's not what musicians were originally. It's a weird perversion born out of capitalism. I feel like this game was against the way music has come to be thought of.

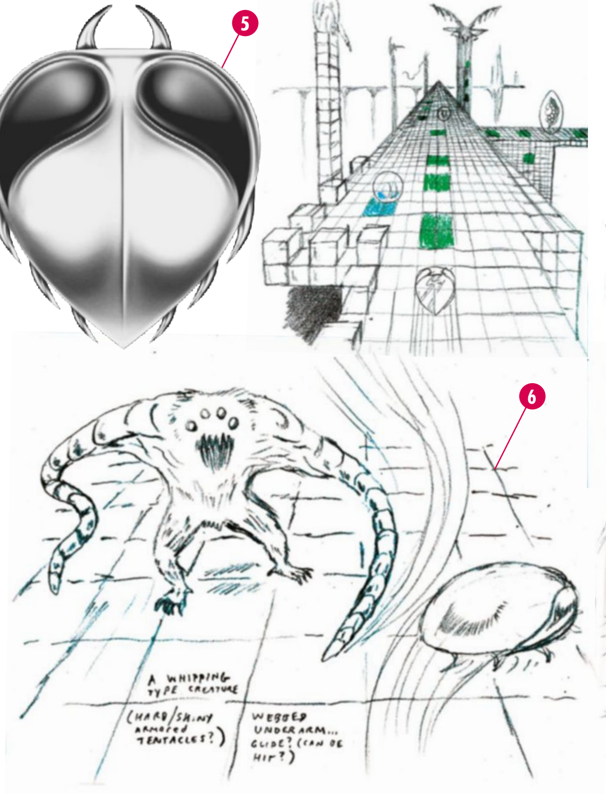
How is writing music for a game different from writing music for a live audience?
It's fundamentally different. It's like the difference between speaking to someone in person and writing them an email. In live music, you're communicating with an audience in real time. When you're doing music on a computer, you can almost be dishonest about your intentions. You can craft it. You can say something that you might never have said in person. It's much more dangerous than playing live.

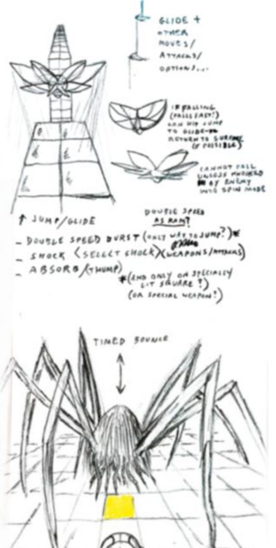














❶ The music for *Thumper* was composed by its lead designer Brian Gibson, one half of rock band Lightning Bolt. ❷ Early versions of *Thumper* allowed players to switch between different areas of the track, but the idea was deemed too complex and abandoned. ❸ Using Marc Flury's engine, created specifically for *Thumper*, Gibson was able to easily introduce, test and – if necessary – remove elements such as enemies and bosses. ❹ *Thumper*'s engine and level-creation tools were built from scratch and continually iterated upon. Less than a year prior to release, the technology was still being optimised. ❺ The chrome beetle that serves as *Thumper*'s protagonist was the brainchild of Mat Brinkman, an illustrator and personal friend of Gibson. ❻ Brinkman's illustrations also provided inspiration for *Thumper*'s dark, oppressive atmosphere. It exists in stark contrast to the joyful experience of playing most music-driven games



STUDIO PROFILE

SUPERMASSIVE GAMES

The UK studio on a mission to live up to its name

By Nathan Brown

Photography **Olly Curtis**

We've seen fuller trophy cabinets than this. They've been more prominently displayed than this one, too, which sits at the back of the main development floor at Supermassive's Guildford HQ. There's no shame in it: the studio has been in business for only eight years, during which time it has worked largely in niches. Yet standing alone, gleaming on the middle shelf, is a BAFTA, and a coveted one at that: the 2015 award for Best Original Property, awarded to Supermassive's breakout hit, the teen slasher *Until Dawn*.

"It's such a difficult thing to do," managing director **Pete Samuels** tells us. "It always has been, in our industry, to create something from scratch. It's opened some doors for us, for sure." After eight years in which it has worked so closely with Sony that it has often felt like a firstparty studio, Supermassive is striking out alone, working on multiple platforms and with other publishers. It's betting heavily on VR, working on a range of new hardware with unfamiliar tech, changing its day-to-day operations in order to accommodate its new way of working. There might not be much in that trophy cabinet, but what's inside matters a tremendous amount, and has transformed the studio that won it.

Still, to understand its impact, you need to go back to the start. Samuels was on sabbatical from his job as senior development director at EA, sipping a mojito in a hotel bar in Cuba, when he decided to go it alone. He spoke to a few friends and former colleagues, and lured his brother out of semi-retirement to be his business partner. Yet Supermassive would not be officially formed for some time. First, Samuels spent two years in Amsterdam, helming a team of production contractors who helped Guerrilla Games finish *Killzone 2*. That would turn out to be a vitally important deal for Samuels and Supermassive in the years that followed. In the short term, however, it led to an impressed Sony asking Samuels to put together a team to make something for the launch of its new motion controller, PlayStation Move.

"When we started to work with it, it was just a cardboard box with a ping-pong ball on top," **Steve Goss**, executive producer of design and technology, recalls. "Pete was off doing a lot of work with Guerrilla and other studios, and Jonathan [Amor, now operations director], Justin [Rae, former art director], Harvey [Wheaton, studio director until 2013] and I used to sit in a meeting room downstairs, designing our first game." The game in question, the cheerily bonkers AR minigame collection *Start The Party!*, impressed Sony to the extent that it asked Supermassive if it could take on a second game for Move's launch. "That turned out to be *Tumble*, which was where it all really kicked off for the studio," Samuels says. "We grew quickly, from six people to 40 or 50, over eight or nine months. It was the first time we experienced the pain of growth – there was a lot of stuff we'd never come across before – but we survived it. And out of, I think, five firstparty launch titles for Move, two of them were ours."





Supermassive Games managing director Pete Samuels (left) and Simon Harris, executive producer, VR games

"WHEN WE STARTED TO WORK WITH IT, IT WAS JUST A CARDBOARD BOX WITH A PING-PONG BALL ON TOP"

The relationship with Sony was critical early on, and has been ever since; the PlayStation maker has effectively kept the lights on for the studio's entire eight years in business. Supermassive made all but one of the DLC level kits for *LittleBigPlanet*, every one for the sequel, Arcade mode for *LittleBigPlanet Vita*, and lent a hand to *LBP3*. Samuels' early work at Guerrilla yielded the *Killzone HD* gig, some map-making duties on *Killzone Shadow Fall*, and the use of Guerrilla's engine for the making of *Until Dawn*. Supermassive went on to develop *Walking With Dinosaurs* for Sony's Wonderbook AR project. And when PSVR came along it was there, again, making two of five firstparty launch games, the on-rails shooter *Until Dawn: A Rush Of Blood* and, in a charmingly full-circle move, a virtual-reality remake of *Tumble*. In eight years the only game Supermassive has made for any company other than Sony is 2012's *Doctor Who: The Eternity Clock*. Published by BBC Worldwide, it was distributed by – well, you can probably guess.

SUPERMASSIVE GAMES®

Founded 2008
Employees 100
Key staff Pete Samuels (managing director), Will Byles (executive creative director), Simon Harris (executive producer, VR games)
URL www.supermassivegames.com
Selected softography *Start The Party!*, *Tumble*, *Until Dawn*, *Until Dawn: A Rush Of Blood*, *Tumble VR*
Current projects TBA

It has been, to the outside observer, often unsexy work. But few could dispute that it has all been valuable experience – often more valuable than anyone could ever have foreseen. After all, there must have been a time when Supermassive's early foray into motion controls with Move must have seemed like a bad idea in hindsight, as public opinion turned against the input method and the industry had no choice but to follow suit. Now, with Move the preferred control method for PSVR and demand pushing eBay prices into triple figures, it looks like a brilliant way to have started a company.

Yet as the studio's name implies, Samuels and co have always had their sights set on something bigger. "The senior team had [previously] worked on big franchises like *Harry Potter* and *The Lord Of The Rings*," Samuels says. "We'd done a lot of big stuff, but to do that independently? Nobody comes along when you're a one- or two- or three-man band and says, 'Here's tens of millions of pounds – go make us a game.' You've got to build a reputation." With Sony, at least, that reputation was first built, and soon cemented. Supermassive was ready for something bigger.

To say that *Until Dawn* took a while would be an understatement, but the story of its development is about more than just the amount of time it took; four years isn't so long for a publisher that has *The Last Guardian* on its books, in any case. Rather, it was the changes it went through. It began as a PS3 game, but ▶





Right now, Supermassive's Guildford headquarters isn't quite at capacity – when development of *Until Dawn* was at its peak, there were around 130 people at the company. The studio is still hiring, however, both for VR projects and traditional console games

was eventually released for PS4; when it was first shown in public, it was exclusively Move controlled, but a rapturous Gamescom reception, combined with the decline of motion control on consoles, meant it was rebuilt around a DualShock. Samuels admits that the push to get *Until Dawn* over the line was one of the toughest times Supermassive has faced. "We were worried about it, about how it was going to be received. We knew it wasn't going to be everyone's cup of tea. They were very uncomfortable times, finishing that game off, the realisation we were going to have to let our baby go. They were nervous times… Looking back, though, we had nothing to worry about."

Indeed. Sales dramatically exceeded expectations, the BAFTA quickly followed, and Samuels and co realised their studio was ready to spread its wings. "I've enjoyed the last 12 months, visiting every big publisher on the planet, having great conversations with them," Samuels says. "I'm excited about the future. We're an independent studio, and we kind of realised last year that a lot of the rest of the world doesn't see us that way, because of the work we've been doing. It's about breadth – there are a lot of people who would love to play the games we make that aren't necessarily PlayStation players. For us to build an audience, I think it's important for us to broaden beyond a single platform."

Details are scant, but Samuels confirms that "a number" of projects in development have deals in place, and hints that another is imminent. What is clear is that Supermassive has an awful lot of irons in the fire at the moment; while Samuels is at pains to point out that this has always been a multi-project studio, things have surely never been quite so varied as they are now. That's due, in large part, to the increased focus on VR. Around a third of the studio's 100 staff is currently working on a VR project, of which there are several, the need to rapidly prototype new ideas more vital than ever in a still-nascent space. "It's the Wild West," executive creative director **Will Byles** tells us. "We'll have meetings about how we're going to do something, then we'll prototype it and it's like, 'Oh my god, that's so rubbish.' It makes you sick, it feels horrible. It's much harder to plan – there's no right or wrong until you prove it's right or wrong, and sometimes the thing that seems to be counterintuitive works the best."

There is tremendous enthusiasm at the studio for virtual reality – unsurprisingly, really, for a group that started out working with unfamiliar new tech, with that cardboard mockup of Move. Supermassive's first work in VR came before Sony's hardware was even available for testing, as **Simon Harris**, the studio's executive producer of VR games, explains. "We built the executable, had to take it to a Sony office, put it on another machine and just sit there, cross our fingers and hope that it ran."

"THEY WERE VERY UNCOMFORTABLE TIMES, THE REALISATION WE WERE GOING TO HAVE TO LET OUR BABY GO"

Run it did, and while things are a little more predictable these days, that spirit of hopeful experimentation remains. VR game-making is still as much a matter of finding out what doesn't work as what does, but Harris and team are even challenging what passes for the status quo. "With *Until Dawn: Rush Of Blood*, we were just slightly belligerent," he says. "There were a load of people standing up at the early [VR] conferences going, 'Yeah, VR's brilliant, but you mustn't do this, you mustn't do that, you can't accelerate or decelerate, you mustn't move the camera…' We were just like, well, what if we do *all* those things? In the rollercoaster sections of *Rush Of Blood*, we break a huge number of these rules that people say you mustn't break, and that's precisely what makes them so comfortable."

Away from VR, the company has similar ambitions. Byles points out the ways that Supermassive bucked convention in *Until Dawn*, importing lighting and animation techniques from the film industry, rather than following the game-design rulebook (for more on that, see **E**288's The Making Of…), and it seems that trend will continue. Unfortunately, the senior team have been around long enough to know not to let any details slip, but we don't need specifics to understand what Samuels' team is going for. "As great as *Until Dawn* was," he says, "and as proud as we are of it, unless the next things we do are better than that, we won't be happy."

The recurring theme is of a studio that is forever challenging itself, moving into unexplored areas, finding the boundaries and at least poking at them, if not pushing through them completely. A studio that has always done so, in fact, but has perhaps been a little too close to a single publisher for enough people to notice. Supermassive, stepping out from under Sony's wing, seems set to finally live up to its name. If everything goes to plan, that trophy cabinet is soon to become a lot more crowded. ■



1 *Start The Party!* used the PlayStation Eye camera for a series of augmented-reality PS3 minigames.
2 A sequel, a digital-only release subtitled *Save The World*, followed in 2012.
3 Block-stacking puzzle game *Tumble VR* includes a competitive multiplayer mode that uses the TV screen.
4 *Until Dawn*'s cast of imperilled teens included Heroes star Hayden Panettiere and Mr Robot's Rami Malek.
5 PSVR launch title *Until Dawn: A Rush Of Blood* is a shooter set on a fairground ride, riddled with jump scares

PLAY

REVIEWS. PERSPECTIVES. INTERVIEWS. AND SOME NUMBERS

STILL PLAYING

Star Wars Battlefront PS4
The sole happy consequence of another winter of unavoidable Star Wars hype is the release of *Battlefront*'s free DLC, *X-Wing VR Mission*. It's perhaps a little slower than we'd like, but we can't fault EA for prizing accessibility over intensity where Star Wars is concerned. Regardless, the result is delicious, an intoxicating spot of fan service screaming to be expanded into a full game.

Pixeljunk Shooter PS4
Dipping back into Q-Games' blaster for a father/son co-op run reveals its suitability not only as a great game for kids, but also an excellent way to teach children some physics. Lava melts ice; water solidifies lava. Then there's that purple magnetised liquid, and the giant rock worm's gastric juices, creating control-sapping gas bubbles… OK, perhaps it's not *entirely* textbook.

Watch Dogs 2 PS4
Open-world games that give you weapons have a horrible tendency to get out of hand. If you haven't ever been chased out of a settlement by what feels like a village's entire population, you've not really played *Skyrim* properly. With fellow humans in *Watch Dogs 2*'s mix, though, Ubisoft pushes things to a new level. Being pursued by not only the police but a pair of hunters named neocortex999 and big_nutz86 really gets you thinking about your wild misdeeds.

REVIEWED THIS ISSUE



Explore the iPad edition of **Edge** for extra Play content

To those who wait

The PlayStation Europe Twitter account recently announced that *Horizon Zero Dawn* would be released in the territory two days early. Within seconds, some wag had replied: "So a day later than the rest of the world, then."

A day? We used to wait months for the localisation of the latest big thing from Japan – and by the time it finally arrived, it would be bordered and running 17.5 per cent slower. Frustrating, sure, but when a long-awaited game finally arrived on local shop shelves, it meant something.

It's a feeling that's somewhat absent from the modern game industry, with its simultaneous – or, in *Horizon*'s case, as good as simultaneous – worldwide releases. Nowadays the closest we get to that tantalising anticipation is hammering F5 on a webpage while waiting for a dispatch confirmation, or cursing our console's download speed.



Until this month. It has been nine years since Fumito Ueda began work on *The Last Guardian* (p106). We have spent most of that period under the grim impression that we'd never get to play it; that Ueda or Sony would decide it was never going to happen, and put it in the bin. But it is here, and the phrase 'worth the wait' has rarely felt so apt. Indeed, the wait might have made it even better, the longing, the anticipation, only intensifying over time.

Final Fantasy XV (p110) has been just as long in the making, with an even more troubled gestation, seeing changes of name, game, and even those making it. The wait has been painful, and the results can be too. But would you rather have *FFXV* and *The Last Guardian*, or *Dead Rising 4* (p114), a game made to a deadline and a fixed template that offers little beyond punctuality? If you like, Sony, delay *Horizon* again. We're getting a taste for waiting.

The Last Guardian

We've been waiting a long time for this. Not the near-decade that has passed since work on *The Last Guardian* began, but rather the 15 years that have elapsed since we first sat through *Ico*'s credits, processing what we'd just experienced. In all its brave and sometimes rickety construction, *The Last Guardian* feels every bit the *Ico* sequel we've pined for during that time. And although we share the young protagonist's trepidation at setting out into the unknown, our fears are allayed with each step taken deeper into GenDesign's captivating world.

For the most part, that reassurance is provided by Trico, the creature that serves as your companion throughout this third chapter of Ueda's loosely linked trilogy. Trico's unusual form is made up from a hotchpotch of recognisable genera. There's avian genealogy in its wind-ruffled feathers and three-toed talons. A canine influence can be glimpsed in the way it scratches itself with a hind leg, and heard in the mournful howls it lets out when it loses sight of you. There are other animals in the squat snout and those big, black eyes, but the dominant characteristics are feline. It's there in the way Trico paws at blocked pathways, rolls its shoulders in preparation for a jump as it stares at a precarious destination, and sneezes while intently watching a butterfly flittering about an echoey chamber. It's such a jumble that it shouldn't work, and yet it all coheres to create the most naturalistic creature to ever exist in a videogame. Unless you're trying really hard, it's impossible to view this wilful, sometimes unwittingly antagonistic creature as the manifestation of code. For all its fantastical elements, Trico feels real.

Which is what makes building a relationship with the beast so engaging. On your first encounter, Trico is injured and restrained – punctured with spears, hungry, and shackled by a metal chain. The creature is agitated, and dangerous to approach, its pained roar a warning to leave it alone. Removing the broken spearheads is a delicate operation and elicits howls of pain, a violent reaction, but ultimately cautious gratitude. It's a service you provide often throughout the course of your journey, extracting projectiles after battles with the animated suits of armour that guard the towers and chambers you explore. You must also soothe the beast – a process for which you're given no instruction, requiring trial and error to get right.

Trico also needs to eat intermittently, and is partial to a mysterious blue liquid that can be found in barrels throughout the game. At first you'll cautiously roll the kegs vaguely into the vicinity of its mouth, edging them closer if necessary but keeping hands well out of chomping range. Later, you'll pop them right into its mouth, and toss them into the air for Trico to snaffle mid-flight. When you find yourself

Developer GenDesign
Publisher Sony Interactive Entertainment
Format PS4
Release Out now

It shouldn't work, and yet it all coheres to create the most naturalistic creature to ever exist in a videogame



apologising out loud as Trico misses a catch and whimpers as a barrel crashes into its nose, you realise just how well *The Last Guardian*'s spell is working. Every aspect of the game is focused on developing your bond with Trico in this way, to the extent that even learning basic controls or mastering new abilities never feels like a game mechanic, but rather a growing understanding between the pair of you as you gradually learn how to communicate more effectively.

This symbiosis is required in order to make your way through this world. In some instances it will be a simple leg up to higher platforms as Trico stretches out and lets you clamber up its back. Other times you'll leap improbably between perches as the creature's weight splinters wood and sends masonry crumbling into the abyss below. Occasionally you'll even use Trico's dangling tail to descend into otherwise-unreachable spots. *The Last Guardian* reuses *Ico*'s control scheme almost button for button, with Triangle mapped to jumping and climbing, and X to descend from ledges or let go of Trico. Circle is used to interact with objects, including petting Trico, but also to grab onto the beast's feathers (though the boy will automatically grab Trico even if you don't tap the button). It's a superficially intuitive setup that takes some getting used to – years of conditioning will cause the occasional fatal fall when you accidentally hit X to climb up the ledge you're dangling from. The absence of a *Shadow Of The Colossus*-style hold-to-grip button initially makes it hard to jump clear of Trico's body, until you realise that you need to hold X in order to prevent the boy grasping at feathers on the way down.

Even when clambering around separately to Trico, your movement can sometimes feel gummy, especially when it comes to lowering yourself down over a ledge. It's partly a result of the intricate hand-drawn animation, but it's so characterful, and so physical – yanking switches involves holding circle, then pulling down on the left stick, the boy heaving the heavy mechanism down – that the occasions on which he feels unresponsive come across as caution on his part even when the root of the issue lies in PS4 code functioning inelegantly.

It also feels kind of appropriate, given how other aspects of the game play out. Trico will often ignore your requests at first, or simply fail to understand what you're getting at, and while the beast is capable of moving at terrifying speed when it needs to, it mostly pads along at a mellow pace. For anyone expecting a compliant AI companion in the typical videogame mould, it will be maddening – especially when the solution to one of the game's puzzles remains just out of reach. Instead you have to give in to Ueda's experiment, and treat every delay, every failure to ▶

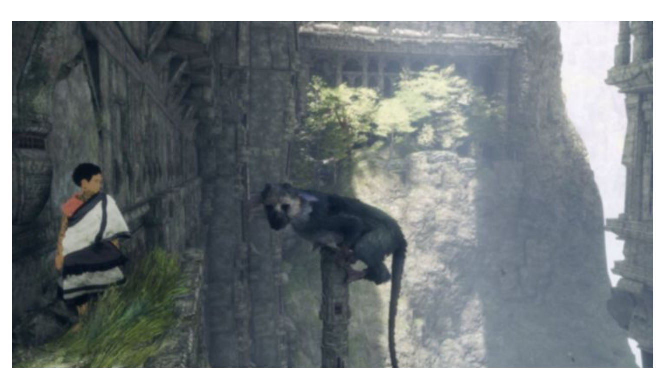
ABOVE Despite some technical hitches, there are few noticeable loading times, and restarting after a death is almost immediate.
LEFT *The Last Guardian*'s art direction is exquisite, and every area deserves to be lingered in for a time before proceeding. Trico's obstinance often helps with that



BELOW *The Last Guardian*'s world is a vertiginous wonder, filled with impossibly spindly towers, sheer cliff edges and structurally unsound bridges. Despite its size, Trico has little problem clambering about



ABOVE The game's shambling enemies are almost comedic in their lumbering gaits and clumsy attempts to grab at you. Their uncertain stances are indicative of some odd, inhuman influence, however



Though the camera can feel unwieldy at times, and its keenness to track back to Trico's position whenever idle proves a little combative, cranking its speed up to almost maximum removes a good amount of frustration

coerce Trico, as part of a learning process – on your part as well as the creature's. Reading the body language and expressions of your headstrong ally is essential to understand what it is thinking, creating passages of play that have simply never existed in videogames before now. When we think of convincing AI companions, we consider characters such as *BioShock Infinite*'s Elizabeth, but against *The Last Guardian*'s achievements even Irrational Games' creation suddenly feels blankly robotic.

The game also succeeds in presenting a number of puzzles the likes of which we haven't seen in games before. Though their solutions aren't particularly complex, the mechanics feel fresh, combining imaginative physics conundrums with the need for Trico to behave in certain ways. It's puzzle design that feels as though it's been created in isolation from existing rules regarding the interaction of characters and physics-enabled objects, and it's all the better for it.

Just like *Ico*, *The Last Guardian* reconfigures the traditional rhythm and stakes of combat, too, but here that first game's formula is inverted. Whereas in *Ico* shadowy spectres would try to drag Yorda into a dark portal unless you smacked them with a plank, here it is you who is in continual danger. The creepy animated-armour enemies move slowly enough, but fling runes that gradually cloud your vision and slow your movement. You can shake these off by hitting any of the controller's face or shoulder buttons, but if an enemy grabs you, you're slung over their shoulder and walked slowly towards the bright white oblivion of their portals. Mashing buttons allows you to eventually wriggle free, and you can wrongfoot enemies by barging into them, but you need to knock them off the edges of platforms in order to remove them permanently. More effectively, you can rely on Trico to dispatch them, smashing them to pieces with its clawed feet, sometimes entire groups at a time. GenDesign mines surprising variety from this simple setup, and Trico isn't always available to offer assistance. The sense of relief is considerable when, just when you think no help is coming, your feathered cavalry intervenes powerfully.

While Trico can shake off spears and swords, the creature exhibits a crippling fear of the stained-glass symbols shown in 2016's E3 trailer. It's during these moments of enforced separation that some of the most fretful, exhilarating platforming sections take place as you walk across high wires and push heavy mechanisms over huge drops to clear the beast's path. As well as *Ico* influences, there's also a hint of *Prince Of Persia: The Sands Of Time* here, in the scale and the stonework, and a tingling magical vibe throughout.

It's difficult at first to ignore issues with framerate (see 'Cat nap') and occasionally sticky controls, not to mention a camera that can struggle in less-spacious rooms and passageways. But it's not hard to stomach them in the context of something so generous with ideas and environments, a game so full of heart and with a character that is unlike anything we've ever seen before. *The Last Guardian* doesn't just live up to its forebears' legacy, it goes further. Despite the callbacks to Fumito Ueda's previous works, it is a unique creation. Outside of indie experiments, we don't get to say that about modern videogames often enough.

9



CAT NAP

Running *The Last Guardian* on standard PS4 hardware – which is what we did for the majority of our playthrough – can result in unstable framerates and even the occasional stutter as a new area loads in a vast outdoor environment. The potentially expensive solution to the problem is to aim a PS4 Pro at it, reducing hiccups considerably. On Pro, players have two options: a not-quite-4K mode with slightly better refresh rates, and a 1080p alternative that offers a near-unbroken 30fps throughout. The latter option should have been the baseline experience, of course, and the performance issues illustrate the sort of difficulties Fumito Ueda and his team have experienced in dragging the game over the line ten long, eventful years on from its inception.

Post Script

The power of Team Ico's sparingly told yarns (contains spoilers)

There isn't a single audio diary in earshot, nor any logs to read through. Cutscenes, meanwhile, say only as much as they need to, never outstaying their welcome. Director Fumito Ueda and his team at GenDesign, formerly the core of Team Ico, have always tackled storytelling in a restrained way, but while *The Last Guardian*'s narrated journey and broader geographical reach contribute to this feeling like the most extensively explained – and directly told – Ueda story to date, it also represents the pinnacle of the team's singular approach.

Much of that is down to the unprecedented expression possible through the extraordinary Trico. Communicating with AI characters has hitherto been a reductive process. Press a button to trigger dialogue; stand nearby when you're ready for them to unlock the door they've patiently waited beside while you faff about elsewhere. Even Elizabeth, who we described as "the most human-seeming AI companion since Alyx Vance" in our review of *BioShock Infinite*, is ready to capitulate to the player's whims when needed. She may be animated with flair, but outside of cutscenes, the illusion of freewill is precariously thin.

Trico is different. The creature appears to be driven by its own desires and intentions at all times, and when it does work with you, you feel the decision was entirely its own. Even when, a little way into the game, you gain the ability to issue direct orders, Trico rarely responds immediately, and may even need a degree of coaxing to get it to do what you need to progress.

It's in these situations that being able to read Trico's facial expressions and body language becomes so important. The creature might look towards the ledge you're trying to encourage it to reach up to, then back to you before tilting its head slightly in confusion. Or it might simply be in an unhelpful mood. It's like trying to explain a simple concept to a toddler that has neither the context of life experience nor the vocabulary needed to parse your instructions. And it comes with both the same feelings of frustration – when what you understand implicitly isn't understood by someone else – and the sense of satisfaction when you find a way in which the pair of you can communicate effectively.

Things are further obfuscated by the fact that what you're asking of Trico is often a bespoke, one-time action. In one section, for example, you must encourage it to dive down into deep water to get through a submerged tunnel. In another, a rickety cart must be used as a catapult, with Trico the counterweight. The gradual increase in your understanding of the creature's motivations and whims communicates a developing relationship quite unlike any other that has played out in a videogame in the past.

As with every other aspect of the game, Trico's reaction to these glass barriers is neither guaranteed nor binary





Environmentally, too, *The Last Guardian* is a masterclass in unforced narrative construction. Like the castles, structures and surroundings of *Ico* and *Shadow Of The Colossus* before it, The Nest is an evocative location, contrasting brightly lit areas of shimmering grass and trees with dank, lifeless interiors whose majesty has long since crumbled. The purpose of the vast network of towers and chambers is never fully explained (though a chilling, wonderfully odd revelation hints at its relationship with the wider world). Nor is the reason for Trico's distress at seeing the ominous eye symbols ever made clear. You're left contemplating what could've happened to instil this fear, what that eye symbol represents, and how much history must have passed before your arrival. But, as with every other aspect of the game, Trico's reaction to these glass barriers is neither guaranteed nor binary.

Just as *Shadow* *Of The Colossus* included heart-stopping references to *Ico* – the Queen's Sword, for example, and the hidden beach – *The Last Guardian* also references the wider world of the three games. It's there in the bleached stone of The Nest's architecture and pea-green foliage, and the way the game's enemies attempt to drag you back to some sorcery-conjured portal if caught. But sharp-eyed players will also spot *SOTC*'s vitality-giving lizards scurrying about the place (here they serve no gameplay function), and one particularly exciting moment sees you encounter the same distinctive, dangling cylindrical cages in which Ico finds Yorda imprisoned. *SOTC* gave up its secrets slowly, so there's likely more to discover here.

No series – bar *Dark Souls*, perhaps – so effectively instils a desire to better understand the world beyond its playable area's boundaries, whether that's pining for the opportunity to explore the mainland in *Ico*, trekking to the distant silhouetted structures on *Shadow Of The Colossus*'s horizon, or scaling the encompassing cliff wall that encloses The Nest. Ueda consistently finds the delicate balance between saying too much and offering too little. Each is told from a perspective of youthful naivety that contrasts with the mournful realities of adult life in a universe of superstition-driven cruelty and powerful, though physically limited, magic.

In its central relationship, *The Last Guardian* is Ueda's most emotionally unguarded game yet. The bond you develop with Trico is lasting and gets its hooks into you to such an extent that it's almost upsetting to find it absent upon starting a second playthrough. And while each element of the game is delicately constructed from the least material possible, the resulting whole is one of the most affecting videogame stories ever told. ■

Final Fantasy XV

Developer/publisher Square Enix
Format PS4 (tested), Xbox One
Release Out now

Yu Suzuki posited recently that the most interesting games aren't the ones whose every element combines harmoniously, but those with jagged edges. He'd probably like *Final Fantasy XV*, which proves to be spikier than any of Tetsuya Nomura's designs. That such a luxurious production should turn out to be so scrappy in places isn't really a surprise: ten years of development means ten years' worth of accumulated ideas, and the finished game suggests that director Hajime Tabata and his team weren't sure quite what to leave out. The results are inconsistent. Here we have an open-world game that ends up funnelling you into corridors. A road trip where your car is all but glued to the tarmac. Attention has been lavished upon mouth-wateringly detailed renders of foodstuffs, but the camera barely qualifies as functional during indoor skirmishes. It features a genuinely progressive take on male relationships, yet its treatment of its female cast is retrograde. And it contains a series of missions where Noctis Lucis Caelum, heir to the kingdom, is asked to retrieve lost dogtags for a man named Dave.

There's something to be said for a mega-budget game this determinedly weird, however, and *FFXV* sets out its stall from its opening moments. Four men push a car slowly down the road. "Not exactly a fairytale beginning," grunts the muscular Gladiolus, who, alongside nerdy driver-cum-chef Ignis and puppyishly eager photographer Prompto, joins the player-controlled Prince Noctis on this offbeat road trip. Since Noctis is soon to be married, it's apt that what follows – at least for the first half of the journey – should capture the camaraderie of a stag holiday. Sure, there's no alcohol involved, and a few more face-offs with fantastical beasts than you'd expect, but these likeable young men share a rapport that carries the game during its bumpier stretches. The performances are adequate rather than excellent, but everything from the way the group bonds over food around a campfire at the end of each in-game day to the affectionate verbal sparring as they jog towards the next waypoint works to sell their friendship.

They're good company, in other words, and as such you're happy to fall in with the relaxed rhythm of the early chapters. Choose to take the wheel, and you can simply squeeze the accelerator to follow the road automatically, only reaching for the analogue stick when it's time to pull in at a parking stop. Let Ignis drive and you'll automatically cruise to your destination, allowing you to take in the views while you fiddle with the in-car stereo, choosing from a selection of familiar themes from past games. You can hop out at any time, but you'll rarely feel the need, with regular stops along the route to fill up with gas and stock up on items. It finds a sweet spot between freedom and gentle guidance: map icons denoting points of interest will only appear once you've either located them by simply exploring the local area or spoken to a restaurant owner, who will point you towards procurement spots and send you to clear out a given number of monsters from specific areas.

Since Noctis is soon to be married, it's apt that what follows should capture the camaraderie of a stag holiday

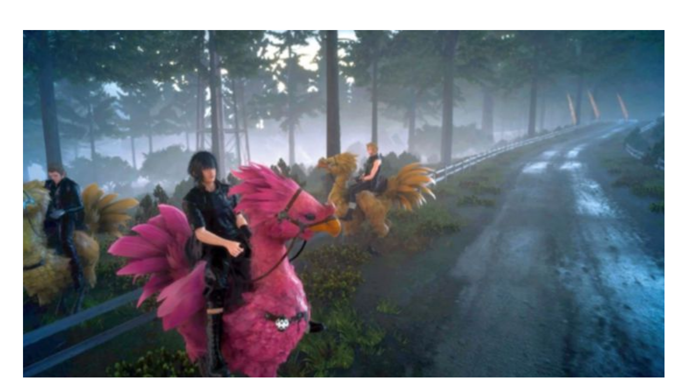


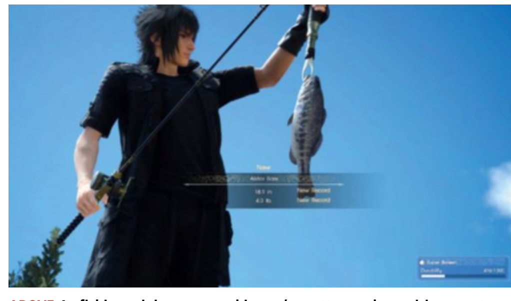
There are hints of *Dragon's Dogma* and *Xenoblade Chronicles* in the combat, which is dynamic and flexible without ever feeling intuitive or elegant. Rather than tapping a button to attack, you hold it down, pulling off simple combos with directions on the analogue stick and swapping weapons via the D-pad. You'll hold another button to phase through enemy attacks, though this costs MP, which can be refilled by finding the space to drink a restorative or by warping to higher ground, where your health bar is replenished. These are the ideal spots from which to unleash warp strikes, which launch you towards opponents, with damage multiplied by distance. All the while, your teammates merrily whale away, until you command them to pull off a special move which consumes another gauge. Ignis, for example, has a Regroup action which sees you all briefly withdraw from the frontline for a top-up to HP and MP, reducing the reliance on consumables.

It's exciting at first, but its limitations gradually become clear. Magic is one casualty: since each spell produces powerful area effects and you can't direct your allies in general combat, there's little point in handing them a spell that's as likely to hit you as your opponents, and while you can use them more prudently, there's nothing to stop the AI from wandering into the path of the fireball you just hurled. Summons are as spectacular as they are rare, and the conditions that need to be fulfilled for their arrival will often see them absent during lengthy boss fights yet present to obliterate the last of a group of cannon fodder. The camera simply cannot cope with tight spaces, but also struggles with larger guardians, leaving it all but impossible to gauge when an attack is about to land. Only sometimes will you be given a button prompt to dodge and then parry to turn the tables; that, too, can obscure the action.

As for the story, it doesn't really kick in until the second half, and when it does, you may wish it hadn't. With no one but the four leads offered any kind of character development, it's impossible to invest in the plot, not least since it all but requires you to have seen CGI prequel Kingsglaive to make sense of it all. The reins are steadily pulled tighter, and attempts to vary the pace – including tedious stealth interludes and crude cattle-prod scares – fall flat. By then, *Final Fantasy XV* has generated just about enough goodwill to take you through to the credits and beyond. But even as you reflect on the rarity of a blockbuster that's willing to take real risks, you'll be left with the uncomfortable realisation that ten years wasn't quite long enough, after all. Those jagged edges are, in the end, just a little too sharp.

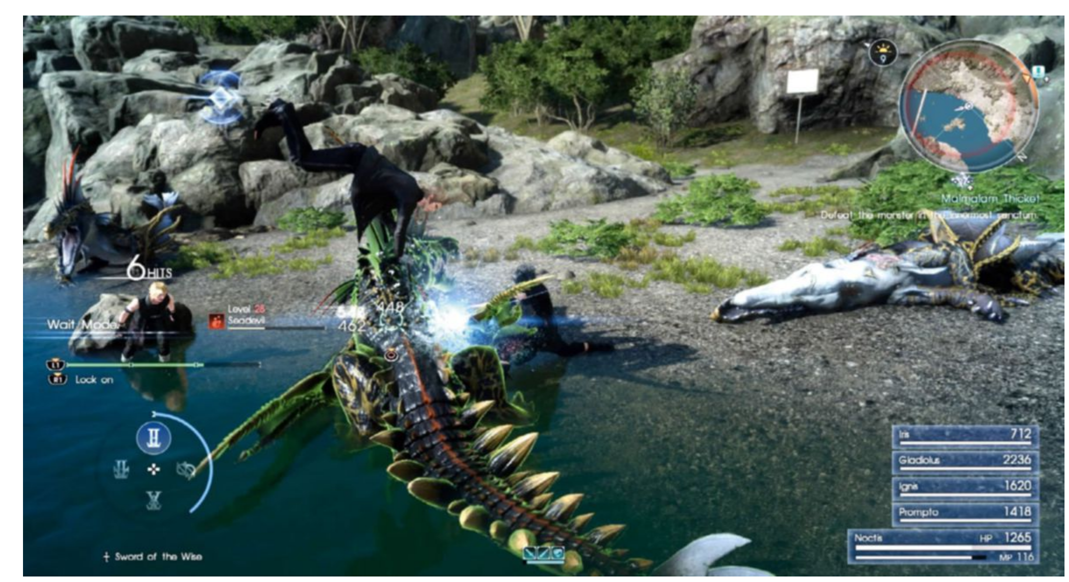
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ABOVE As fishing minigames go, this one's pretty good, requiring you to keep an eye on your line's durability as you move the rod left and right to track the fish as it struggles, reeling in only when its movement slows





TOP Chocobos can be rented for a very reasonable fee at various rest stops, and they come with a whistle that lets you summon them to your current position at any time should you leave them behind. Keep them well fed and you can increase their stamina or glide distance. MAIN You can apply fresh paint jobs and decals to your car, the Regalia, though it's the passengers you'll be watching most closely on each journey. Gladiolus can often be found reading, while Noctis will occasionally take up a higher perch on the back seat. RIGHT Since the camera doesn't always play ball and dodging when surrounded can see you phase into more trouble, you're often best warping in and out of battle – especially since there's a damage bonus for strikes from distance. Rolling behind slower-moving foes works a treat, with allies joining you for powerful blindside attacks



Filling up with petrol is one of several mundane routines that become oddly endearing, not dissimilar to shaving and showering in *Deadly Premonition*. Was Tabata taking notes during Swery's GDC talk on loveable game design?

Post Script

Snapshots over storytelling: why FFXV's photography is key to its appeal

Chosen ones, dark visions, crystals, ancestral relics, daemons and sacrifices: despite its contemporary leanings, *Final Fantasy XV*'s plot runs the gamut of JRPG clichés, and except for a couple of surprises, it does very little new with any of them. It's disappointing, but it's not as ruinous as you might think. In any JRPG, the overall story matters far less than the people with whom you're making the journey. A party whose company you enjoy is half the battle, and that's a nail Square Enix manages to hit squarely on the head.

Central to this is an idea that at first seems to be little more than a minor detail. Plenty of other games have photography elements, after all, but the difference here is that you're not the one calling the shots. Rather, it's the ebullient Prompto who's constantly on the lookout for photo opportunities; he'll even occasionally encourage you to stop the car so that he can take a group snap in front of a landmark or a particularly striking vista. In one side mission we find ourselves standing on the shore of a lake, tempting a colossal beast to draw nearer so that he can capture the perfect shot.

You might well find these asides unnecessary – in which case, you'll be happy to learn that for the most part they can be ignored. But Prompto also takes shots invisibly as you play. As you settle down for the night, you'll be able to flick through them: some are taken at fixed moments in the story, but most are generated from the day's activities and will thus vary greatly from player to player. You can even choose to give Prompto the ability to take selfies during combat, denying yourself a potentially useful support option for the sake of more interesting pictures on the camera roll. Occasionally, a photo will be overexposed or poorly framed, but that only adds to the illusion that they were taken by a human being. And, as Prompto's skills level up, he'll unlock new filters which are smartly deployed to add greater visual variety to the selection.

None of this has any meaningful impact on how the game plays, but it's absolutely crucial in establishing the overall tone. It grounds the more fantastical elements and helps make the group more relatable. Who hasn't found themselves in a group crowded around a friend or family member's phone screen, pointing and laughing as they scroll through their camera reel after a holiday or a memorable night out? Later in the game, the photos achieve a surprising poignancy: as Noctis is separated from his friends, they represent a look back to happier times.

From staged snaps to more intimate, unguarded portraits, you can save your favourite shots to an in-game album, and by the time the credits roll you will have created an extremely personal document of your time with the group. It's a handy way to recall moments that your brain might have easily discarded over the course of 40 to 50 hours – though it's a pity that what you were doing at the time is rarely quite as interesting as Prompto's photography makes it appear.

Yes, in a game such as this, with the heft and sweep of an epic, photography might appear to be a tiny, insignificant feature. But whether you bed down for the night in a tent or spend a few gil to stay in a roadside motel, this seemingly mundane routine works wonders in deepening your connection with the group. As you sift through the photos, the others will occasionally remark on individual shots, and while there's the occasional bit of good-natured ribbing, you'll more often hear them praise Prompto for the quality of his photography. It's a reminder of how infrequently we see games depict male friendship without lapsing into hollow machismo. What a rare treat to play a game where men are allowed to bond over selfies, rather than shotguns. ■

Dead Rising 4

Developer Capcom Vancouver
Publisher Microsoft Studios
Format PC, Xbox One (tested)
Release Out now

We like to think that, what with all the practice videogames have given us, we'd be pretty handy in a zombie apocalypse. We'd know basic evasion and barricading tactics, how to knock together a few weapons, and would have a grasp on the fundamentals of crowd control. But in the unlikely event of a viral outbreak that transforms the population into a teeming mass of unthinking, shuffling drones, we don't suggest turning to *Dead Rising 4* for any kind of training manual. Capcom Vancouver's latest frames the dawn of the dead as no more threatening than the average Saturday afternoon at the shops.

Well, things will claw at you, grab you and sometimes try to bite you, so perhaps the first day of the sales is the more appropriate comparison. Indeed, the latest zombie outbreak to affect *Dead Rising*'s long-suffering United States kicks off on Black Friday, a narrative caution against the perils of rapacious consumer capitalism that is delivered with all the subtlety of a sledgehammer with a power drill gaffer-taped to the end. The streets of Willamette, Colorado – the scene of the first *Dead Rising*, to which Capcom Vancouver has controversially chosen to return here – are overflowing with dozens, hundreds, thousands of zombies, but in the 20 hours it took us to finish *Dead Rising 4*'s campaign we can count the number of times we felt truly imperilled on the fingers of one hand.

This absence of danger serves to almost completely undermine the entire basis of the zombie fantasy, but then *Dead Rising*'s take on the fiction has been steadily building towards this: a game that is not about avoiding trouble but causing it, the undead hordes not there to scare you but to instead serve as fodder for a suite of unfathomably bonkers weapons, combined from items that are conveniently slathered across the open world and based on blueprints hidden in its little corners. With so much attention paid to how you can administer death, Capcom Vancouver holds no interest in making you fear it.

So the skill system delivers upgrades that see you end the game with double the health pool you started out with, your damage output massively increased, your damage taken significantly reduced. All healing items have the same effect, a pot of coffee bestowing the same restorative effect as a medkit, some headache pills, a burrito, or a bottle of absinthe. Look at the teeming masses of zombies in this sizeable open world and *Dead Rising 4* feels like a great stride forward from the compact, spartan original game. Think of its tight time limit – absent here – and the way a single zombie could ruin your entire game, and it feels like a huge step back.

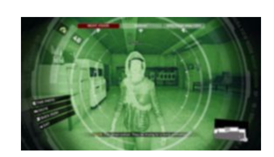
Still, once you learn to take *Dead Rising 4* on its own terms, there is fun to be had, at least for a while – and assuming everything works as intended. The combo weapons have never been so ludicrous, and carry capacity can be greatly upgraded using the skill system. There's a good pace to missions, where you steadily accrue a ridiculous (and ridiculously powerful) arsenal before unloading it all on the end-of-level boss. And there are frequent set-pieces that see you step into the new Exo suit, which lets you stomp about the place using exclusive weapons while being even closer to invincible than you are in your regular duds. Speaking of which, clothing is, as always, a joy, and it's hard to complain too much about the absence of peril when you're wearing the bottom half of a chicken suit, Sir Arthur from *Ghosts 'N Goblins*' helm and beard, and a *Street Fighter II*-themed Christmas jumper.

It's hard to complain too much about the absence of peril when you're wearing the bottom half of a chicken suit

Yet even once you've grown accustomed to *Dead Rising 4*'s thematic niggles, there are plenty of problems elsewhere. It's buggy, with mid-mission scripting failures prompting checkpoint reloads, gates refusing to open, side-missions failing to complete, button prompts declining to appear, and even the occasional failing with the basics of combat. The Evolved zombie, the most annoying rank of enemies, which zips around the place at speed, has also been blessed with a disappearing hitbox; you'll finally pin the flighty swine down, only to watch your melee weapon pass clean through it. There are similar problems at range, when clean shots inexplicably miss targets. You'll quickly learn to rely on area-of-effect weapons – an RPG, perhaps, or the Laser Slicer, which deploys a series of energy tripwires that deal continuous damage – but these are nonetheless damning failures in a game that seems to exist solely to extol the virtues of killing things.

Clearly the need to get a game with such a heavy Christmas theme onto shelves in time for the holiday season has meant *Dead Rising 4* has shipped with a few unpleasant, and entirely avoidable, tics. The festive setting is used well, at least, with Willamette's mall decked out appropriately, combo weapons following a similar theme, and some jarringly cheerful muzak renditions of Christmas classics awaiting in the menu screens. Indeed, it's as we head into the skill menu to further boost our already tremendous destructive power, and pick upgrades to the sounds of a lounge-jazz version of Jingle Bells, that *Dead Rising 4*'s real message becomes clear. This is not a caution against mindless consumerism, but a celebration of it, a game where the world and all its contents are yours to do with as you see fit. It's an endless stream of toys, clothes, currency and upgrades you're invited to do play around with, then throw away before the novelty has had a chance to wear off – and with virtually no consequence or prospect of failure, Capcom Vancouver has repositioned the zombie apocalypse from your worst nightmare to the ultimate power fantasy. Invincibility, we must admit, would be a cool Christmas present.

6



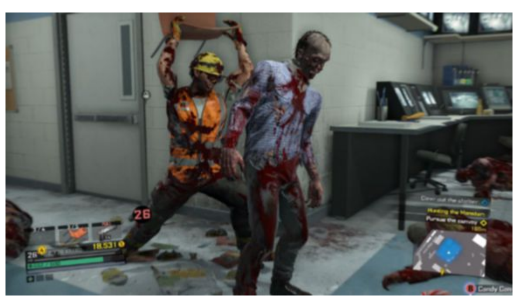
LENS FLAIR
The return of the first *Dead Rising*'s hero Frank West means a return of his camera, and while you can still snap scenes – and selfies – of comic violence in exchange for a chunk of Prestige Points, Capcom Vancouver has devised plenty of other ways for you to use it. The most common is an investigation, where you survey a scene for evidence using either the regular lens, a night-vision attachment, or the Spectrum Analyzer, a sort of UV filter which reveals handprints or access codes that grant entry to secret rooms. Clearly intended to break up the pace, it's a little deflating that Capcom Vancouver has taken *Dead Rising*'s defining mechanic and used it to implement the thousandth Detective Mode homage of the year.

RIGHT Exo suits are found around the world, and their use is time-limited, denoted by a draining power bar. Those used in missions are blessed by nearby wireless charging stations, so never run out. MAIN Area-of-effect weapons are certainly useful on the busy streets of Willamette, but explosions simply alert more zombies to your presence. The quickest way to get around is either by vehicle or, if on foot, simply avoiding everything. BOTTOM As your combo counter reaches certain milestones, you're granted the use of a skill move. Some instakill a single target; others, like this electric axe blast, will kill everything in the vicinity









ABOVE These fancy combo weapons, with their funny sound effects and devastating damage, are all well and good, but sometimes only lamping something over the back of the head with a chair can scratch the itch

Steep

You'll believe a mountain can talk. Reach a new peak in *Steep* and you'll hear its voice booming out, almost as if you'd been carving powder in a very different sense. One welcomes you as a dear friend; another boasts that its crags are as old as time itself; a third wonders who might deign to disturb its rest; a fourth promises to break you. Before you set off, before all the ostentatious event markers, irritating companions and intrusive branding, *Steep* establishes an offbeat tone that sets it apart from others of its kind. It's a strange game, in fact, and ultimately that's to its advantage.

For a while, however, it all feels like a bit of a muddle, even if immediate impressions are likely to be positive, as you quickly realise that this vast open world of Alpine peaks can be negotiated with no loading times whatsoever. Event restarts might require you to hold down a button for a couple of seconds, but you'll be deposited back to the starting line instantaneously thereafter. Choose an overview of the whole range instead and you'll be whisked to a 3D map, from which you can select a dropoff point. Again, once you've made your choice, there's no waiting involved.

In theory, you're able to choose from four sports on the fly by pulling up a radial menu, though that's not entirely accurate: you can't swap in mid-air, and you'll need to come to a standstill if you're going downhill – which can take some time when you're ragdolling off rocks after a high-speed spill. Two of the choices are all but interchangeable, as you're able to enter the same race, trick and orienteering events whether you're on a snowboard or skis, and the difference in handling is negligible. With two planks you can ride backwards (good luck doing that in firstperson mode), otherwise there's rarely a compelling reason to switch from one.

Wingsuit events, meanwhile, suggest someone at Ubisoft Annecy got fed up waiting for Nintendo to release a new *Pilotwings* and took matters into their own hands. The controls are simple but the courses often anything but, sending you swooping through narrow holes and plummeting down spiralling tunnels, twisting past jutting rocks above and below. In other events, you're asked to glide just above ground to earn proximity points, a gentle shudder of controller feedback letting your palms know that your score is ticking upwards when your unblinking eyes are fixed upon your avatar. If this is *Steep* at its most exacting and intense, paragliding, where you hug cliff edges to collect updrafts and gain height, is a little too sedate for its own good – at least during its race events. But there aren't many entries in this category anyway, so it's an activity best saved for lazily taking in the sights from above, or when you need to get back up a little way and don't fancy the slow trudge on foot.

Though you're spirited away to event spots once selected from the map, if you want to start a run elsewhere you'll need to either make your own way there or use up one of your limited number of helicopter passes. Alternatively, to unlock new drop zones to which you can fast-travel you'll need to stand within 1,000 yards of them and highlight them through your rider's binoculars. You'll see some of these during events or general exploration, but often you'll be too far away to tag them, which tempts you back to the map in order to search properly. Unfortunately, the map proves unwieldy to navigate: those pristine slopes are pocked with icons, as is the Ubisoft way, but moving a cursor within a 3D space is clumsy, not least when it's subtly tugged towards markers you're scrolling past. And for reasons we've struggled to divine, events you've already completed will often be highlighted with a 'new' tag, which can make finding actual new ones a chore.

Befitting its name, *Steep*'s challenge is positively vertiginous on some of the Hard-level courses. In most cases, it's difficult in the right way, but sometimes you'll fall victim to spiteful placement of fences or wilful checkpoint positioning – and, occasionally, the two are combined. Its trick system, meanwhile, is ostensibly simple – this isn't *Tony Hawk*, or even *SSX* where you'd be pulling physics-defying spins and flips off every ramp – but it's obtuse in its demands and peculiarly fussy in its timing. Away from the pressure of competition, it starts to feel more natural, when you have open ground stretching out in front of you and plenty of time to prepare for each jump.

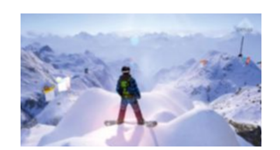
Learn to curb your competitive instincts and stop reaching for the restart button, and *Steep*'s minor frustrations steadily begin to melt away. When you miss a checkpoint, it's often best to simply keep going instead: the run is automatically cancelled anyway, so why not take advantage of being out of contention? The thrill of successfully weaving through a dense thicket of slender trees, even if it's more by luck than judgement, is still there when you're doing your own thing. And as a multiplayer game, *Steep* is at its best when you're not beating your fellow boarders but simply joining them.

So you might well roll your eyes when your in-game colleagues berate you for a bronze-medal performance or push you to enter a sponsored event, or when you ask to be dropped off and you're held up by a cutscene showing your rider glugging a popular energy drink. But we sense Ubisoft Annecy's heart isn't really in any of that. There's something quietly wonderful here when you step away from the corporate nonsense and braying thrillseekers; when those icons drift away, the music fades out, and you can carve your own path until the slope levels off and the edge of the world approaches. It turns out the mountain really does have something to say, but it's only when the noise is gone that its message can really be heard.

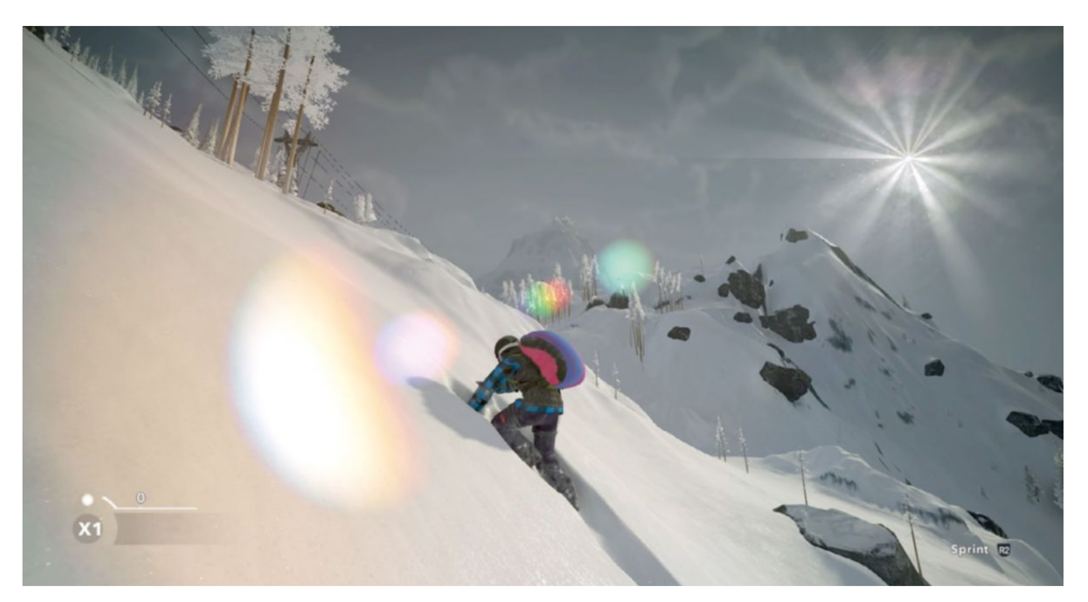
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Developer/publisher Ubisoft (Annecy)
Format PC, PS4 (tested), Xbox One
Release Out now

There's something quietly wonderful here when you step away from the corporate nonsense



PEAK FITNESS
The quickest way to progress and unlock new mountains is to compete in events. These come in six different varieties, which are tailored towards specific playstyles, though you can't really afford to ignore too many of the kinds you're less keen on since you accrue XP much more slowly elsewhere. Our habit of finishing events by simply carrying on down the mountain meant we ranked up as an Explorer a little sooner than in the Extreme Rider category, though by happy accident we ended up doubling as a Bone Collector. As you level up and complete events you'll earn new gear, but with no stats to boost, they're an entirely cosmetic concern. Reaching the level cap of 25, however, is worth the effort: your reward is unlimited helicopter tickets.



LEFT It's pretty up here, and while you're climbing you might as well swing the camera around to take in the views – even with a sprint button, it's a slow process. BELOW A vertical strip of orange light displays your next checkpoint, though the rings you need to pass through on wingsuit runs can easily be obscured, either by your own avatar or by scenery. MAIN Your most recent run is represented as a dotted line. From the 3D map you can select any of those dots to return to that spot – so long as it's outside an event. You can share a custom run with friends



ABOVE There are more camera options in replays, including this faintly comical face-on view. The firstperson camera is intended to mimic a GoPro – the shake's authentic but means you'll switch back to thirdperson quickly





Let It Die

This is a Grasshopper game, all right. *Let It Die* is immediately recognisable as the work of perhaps the only studio on the planet for which the phrase 'rough around the edges' is not so much a slight as a mission statement. It's deeply weird, too, as house style dictates: your guide through this often baffling yet compelling game is Uncle Death, a skateboarding grim reaper with an impossible-to-place accent. You hit things with a steam iron wearing only your pants, repurpose traffic cones as helmets, and turn in crafting materials to a chap wearing a spacesuit and a Hitler moustache. So, yes, a Grasshopper game it certainly is.

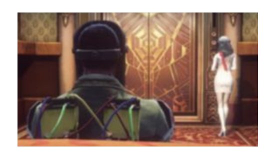
But it's a GungHo game, too, a consequence of the *Puzzle & Dragons* maker levelling off its swollen coffers (and reducing its tax liability) by acquiring Grasshopper in 2013. GungHo's influence is most evident in *Let It Die's* structure, and especially its monetisation: Death Metals, the premium currency that buys you continues in this Roguelike tower of death, bear the same rainbow colour scheme as *Puzzle & Dragons'* Magic Stones. It's a jarring meeting of minds, at least on paper: a developer whose punk aesthetic and mindset means it has little interest in courting the massmarket making a game for a publisher whose biggest game has been downloaded over 100 million times. Weirdly – and we do mean weirdly – it all hangs together quite well.

Indeed, the GungHo influence is a positive one. As a maker of free-to-play RPGs, it understands how to structure a game to engender repeat visits, with login rewards, waiting periods and timed bonuses. It knows how to encourage replay value, as evidenced in *Let It Die*'s crafting system, which has you return to already-conquered floors in search of area- or enemy-specific materials. Most crucially, it understands engagement and monetisation strategies are no use unless players are invested in the meat and bones of the game itself. The result is one of Grasshopper's most mechanically complex games, and it's all the better for it.

So, yes, you start in your pants, as a fighter fresh off the train at the Tower Of Barbs, a mystical, blood-soaked structure that, so the fiction has it, appeared in south Tokyo after a cataclysmic event. While the combat, in style, difficulty and consequence, owes a debt to *Dark Souls*, there's a twist here: the tower's layout is regenerated every couple of days, so there'll be no committing of level layouts to memory. You must keep your wits about you, then, and you'll frequently need to improvise. While you can equip up to six weapons at once – switched between with the D-pad – the durability of weapons found during play is absolutely miserable. Those bought from a vendor in the waiting room, your base of operations at the foot of the tower, will last longer, but you'll still need to keep a watchful eye on how long each has left. Your fists are quick, but weedy, and mistakes are sorely punished.

Developer Grasshopper Manufacture
Publisher GungHo Online Entertainment
Format PS4
Release Out now

You repurpose traffic cones as helmets and turn in crafting materials to a chap wearing a spacesuit and a Hitler moustache



YES EXPRESS
While the most immediately productive way of spending real cash is on bundles of Death Metal so you can continue when you die, you can also pay up to improve your quality of life, rather than just brute-force your way up the tower. The Express Pass lasts for 30 days, and offers a daily login reward of a desirable perk – increasing XP gains, improving health regen, reducing durability issues or increasing carry capacity. But you'll also get to travel by lift and train for free and in comfort. There's just one problem: at the time of writing, they're not available for purchase, GungHo's early server woes causing a delay. That hasn't stopped it getting Death Metals up for sale, strangely.

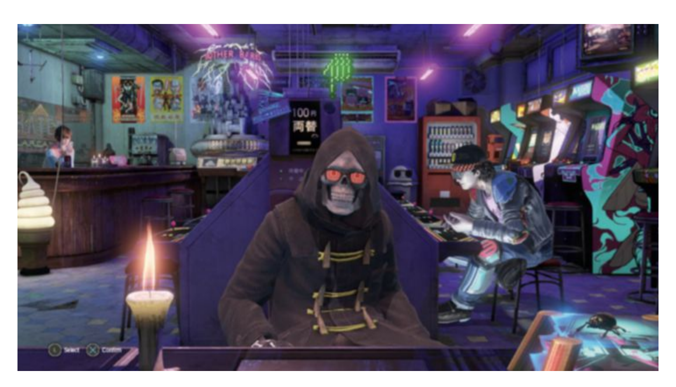
Combat, as in the FromSoftware games that inspire it, is a game of controlling space, making an opening and capitalising on it. Generally, the first hit wins, but certain weapons seem to afford stronger poise: a pickaxe, for example, will continue its swing unless you hit its bearer with something even heavier. Once you're in, an enemy can be stunlocked until death, but foes are only too happy to return the favour. If you're being chased by a group and one of them lands a hit, you're done.

Death is, as the game's name suggests, where things get interesting. You're faced with a choice: spend a Death Metal to revive yourself instantly; hand over a chunk of Killcoins, a currency earned in-game, to come back to life in the waiting room, the cost scaling with how high you were in the tower when you died; or let it die and become a Hater. This AI-controlled warrior prowls the tower and will be yours again if you can kill it, though the tradeoff for not spending anything for its return is the loss of whatever you were carrying before you died. Failing that, you can simply start again, using elevators you've discovered to return to higher floors – though you'll be doing so with a level-one character, their underwear and whatever kit you have in storage or can afford to buy from the vendor, so good luck.

Starting out you'll only have one character type, the All-Rounder, with, as expected, evenly balanced stats. But as you climb the levels, you unlock more specialised variants. An essential acquisition is the Collector, whose larger inventory capacity makes it ideal for returning to earlier floors to hunt down crafting materials. The fighters you aren't using are stored in a freezer; you can send them off on expeditions or assign them to defend yours from similar attacks. You can also go on sorties yourself, in a mode called Tokyo Death Metro that lets you pick a region to fight for. You can even kidnap a knocked-out foe and bring them back to your base, but doing so invites reprisal from the enemy's faction. Like the rest of the game, it's surprisingly well thought through, and oddly compulsive once you get going.

Of course, there are problems: this is, as we may have mentioned already, a Grasshopper game, so hiccups are simply part of the furniture. *Let It Die* is always online, but its servers sadly haven't been; if you quit the game from anywhere but your waiting room, it counts as a death, and we've lost chunks of progress to servers falling over. While there's appeal in the way the tower layout changes, environmental assets are reused too frequently, and the world is a little boring as a result. And the game's love of stunlock has seen us lose entire life bars, and therefore characters, to a single mistake. But like everything Grasshopper makes, *Let It Die* is curiously lovable despite its flaws. Under GungHo's auspice it has made its deepest game in years, and one of its most fascinating, too.

7





ABOVE Apologies: when describing this fellow, we forgot about the mortar board. Character designs are bonkers in the Grasshopper style, but you see Kommander so much for sales and upgrades that he soon seems normal



TOP You launch this game within a game at a local arcade, flanked by Uncle Death. The fighting-game player on the right dispenses tips, while the girl behind the counter dispenses MMO-style quests.
MAIN Coen is the first boss you'll face, but despite his size he isn't too intimidating. A two-hit combo and a flurry of ground pounds are all you have to worry about, and both are generously telegraphed.
RIGHT When an enemy is near death you're prompted to move in for a gruesome finisher, a canned animation that buys welcome time when you're facing large groups



I Expect You To Die

Right from the epic, '70s-flavoured opening credits, *I Expect You To Die* immerses you in the fantasy of being a superspy. But Schell Games is peddling something that's more Archer than *GoldenEye*. Each of the game's four levels is a simple escape-the-room challenge in which success is reliant on trial and error – and continual, calamitous death.

To aid you in your mission, you always carry your trusty silenced pistol, and usually a packed lunch, but must improvise thereafter. Most items in each level can be used in multiple ways, and there's plenty of nonessential stuff to muck around with, too – cigars to smoke, hats to wear, and champagne bottles to pop open. You also have the gift of telekinesis, which with a Touch controller is activated by holding either of the sticks forward and then squeezing a trigger. This slightly contrived setup usefully extends your reach, and you can even make items hang in the air around you as if you're using an invisible cork board.

Every room is riddled with traps and security systems which must be circumvented or disabled. Their associated countdowns are, for the most part, expertly timed to ensure that you have just long enough to complete the task once panic sets in. In many cases this results in situations that really do feel like the climax to a spy movie as you delicately manipulate explosive chemicals or defuse a bomb while trying desperately to shut out the insistent ticking.

The organisations you're working to bring down are pretty determined to stop you. In the first level alone you'll face poisonous gas, a bomb and a retina-scanning system that's determined to melt you with its laser

Developer/publisher Schell Games
Format PSVR, Rift (tested)
Release Out now



LOOK AND TOUCH
While *I Expect You To Die* can be played with a controller or mouse, and is also available on PSVR, Oculus's Touch motion controllers are a particularly good fit for the game. Dials can be intuitively grasped and turned, and pressing any of the big, inviting buttons in the game is a simple matter of sticking out your finger and giving them a prod. Having two triggers – split between index and the rest of your fingers – also makes grabbing levers and guns feel particularly good.

In other cases, things don't feel quite so finely balanced, and the need to start the entire level again if you die can lead to frustration and a fear of experimentation. Still, every room can be completed in two or three minutes once you know what you're doing, so getting back to the point where you failed isn't too laborious – even if deaths can occasionally feel cheap. On one underwater level, two rather laborious tasks make retrying considerably less appealing.

Once completed, there's little reason to go back to any of the missions. A selection of additional challenges (find a way to shower a room in money, accessorise your outfit, or blaze through a mission in under two minutes) provide a little extra entertainment, but the pleasure of toying with each room's systems and objects quickly erodes once you know all of the solutions. When the credits roll, the game feels like it's only just getting into the swing of things, and the existing package is crying out for more, and longer, chapters to get stuck into.

I Expect You To Die is yet another slight VR release that serves as an excellent proof of concept but disappoints by not following through.


7



Superhot VR

We're bent over backwards, holding a handgun sideways and taking aim at our next target's head. Bullets are slowly fizzing through the air as another enemy recoils, as if through treacle, from the hammer we just threw at his head. We can't imagine this looks particularly dignified. But inside Rift at this exact moment, we feel like Neo from The Matrix.

Superhot's time-troubling gameplay – the world and your enemies only move when you do – sings in VR, and makes even the tense original game feel oddly muted by comparison. Here, rather than strafing, you must contort on the spot as *Superhot*'s ruby-coloured, crystalline aggressors move into position like gun-toting glaciers, filling the air with projectiles. You can get away with moving your head – and you'll have to do so in some rather compromising positions to get a clear picture of which threats should be your priority – but as soon as you open fire or move your arms, time will roll a little further forward and the distance between you and that volley of shotgun pellets will decrease.

Just like you, enemies expire from a single bullet or punch, no matter where it makes contact. The dazzling feats of murderous audacity you're able to perform in pursuit of this goal will leave you grinning like an idiot. In one section, we casually deflect enemy bullets with a frying pan while lining up shots. In another we take out three enemies with gracefully hurled snooker balls. Another trio of aggressors suffer the indignity of being executed with their own weapons after trying to make us dance on a podium.

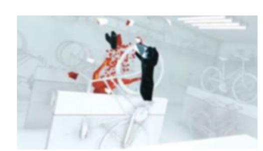
In lieu of being able to move about, each chapter sees you switching between a number of positions within the same level. From each new vantage point you'll often be able to see the shards of the foes that you felled from your previous position, and Superhot Team uses this mechanic to play with your expectations and crack a couple of jokes along the way. While the inter-body hotswitching of the original game doesn't make an appearance here, you gain the ability to burst one enemy's head by clenching your fists. The special attack takes a couple of seconds to charge, however, and time moves quickly while you're using it, so it needs to be deployed strategically.

Though stripped back – the short campaign is over in a couple of hours, and there are no additional modes – the addition of VR, dual-wield Touch controls and full-body movement makes *Superhot VR* feel somehow more fleshed out than its predecessor. It still offers a short, sharp thrill, rather than anything more substantial. But its ideas cohere into a blaze of brilliant white heat while it burns itself out.

8

As you're rooted to the spot, spooling time along requires you to duck about or move your hands. While this can create some amusing 'dukes up' moments, it can also feel a bit frustrating when you're out of bullets

Developer/publisher Superhot Team
Format Rift
Release Out now



SLOW GUNS
There is, sadly, no katana, but *Superhot VR*'s assortment of weapons still represents a satisfyingly violent stockpile. Pistols, SMGS and shotguns comprise the base armoury, but you'll find yourself tossing ashtrays, snooker balls, hatchets, hammers, shuriken and even coffee pots as you fight for your life. You'll need plenty of space to do so, though: in one particularly painful instance, the robust-feeling jaw of an enemy turned out to be our living-room wall.



Super Mario Run

Cards on the table: we didn't like it at first. This was, we now realise, a matter of old habits dying hard – after 30 years of training, vaulting over Goombas rather than jumping on them takes some getting used to – and of expectations being subverted. Mario's mobile debut is predictable in form but not function, both the game we anticipated and also not. It's an auto-runner whose hero moves horizontally but whose design thinks vertically. It's a mobile game marketed to the masses, yet its challenge is tailored towards the committed player. It is, inevitably, a little conflicted, and so are we. But how fascinating that for the biggest Mario launch to date – and the most important one in years – Nintendo has chosen something so boldly experimental.

Take Mario's moveset. As he gambols along and an enemy approaches, your natural instinct is to take to the air. But while you can defeat Koopas and Goombas in the time-honoured fashion, you're also able to hurdle them; a mid-vault tap finishes them off and lets Mario use them as a springboard to higher ground. His jump has greater range, too, and a mid-leap twist to grab some extra air. A new skill is a real taboo-buster: if you land just shy of a platform, Mario can now grab the edge and mantle up. This isn't just to rescue mistakes, either, since many of the levels are built specifically around it.

That's understandable when there's this much vertical screen space, since the game is only playable in portrait orientation. It means you have less time to react to incoming hazards, but also makes for some unconventional challenges. Ghost houses, for example, are repurposed into devious wraparound puzzle boxes, where you move between floors seeking either a key for the exit door, or the door itself. If the difficulty level is relatively easygoing – even novices should rattle through these 24 stages in a couple of hours – that's less true when you're hunting down the five pink coins scattered across the stage. Nab them all, and they're replaced by purple coins, then black, with the level furniture shifted to provide a steeper challenge still.

Some will struggle to acclimatise to its staccato rhythm. Others will curse the muscle memory that makes locomotion feel awkwardly unfamiliar. From that edge-grab to pause blocks and conveyers that turn jumps into backflips, it's an auto-runner that often seeks to arrest your momentum. Yet in a genre so intently focused on flow, this comes to feel new and thrillingly disruptive. It's not quite vintage Mario, but this long-awaited mobile debut demonstrates an ingenuity and a keen appreciation of format that is quintessentially Nintendo.

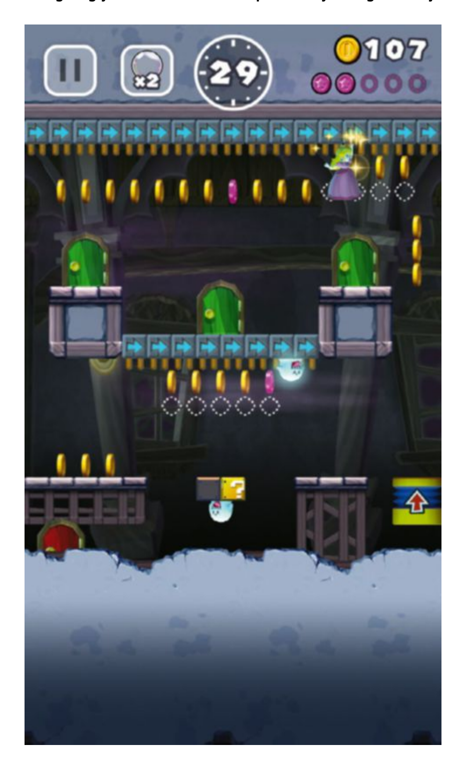
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Publisher Nintendo
Developer Nintendo EPD/DeNA
Format iOS
Release Out now

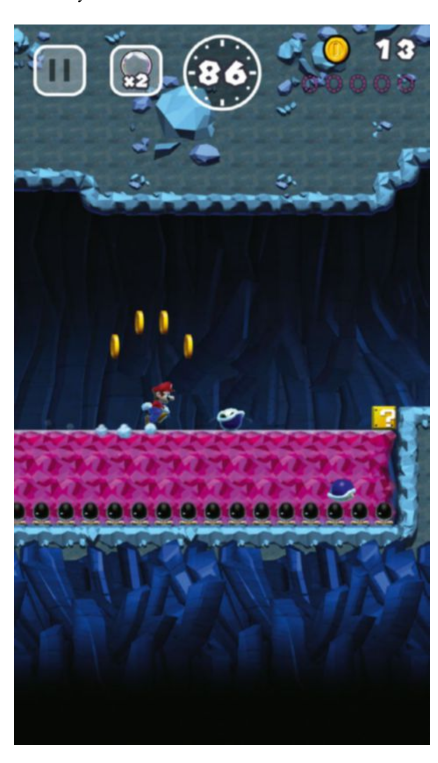


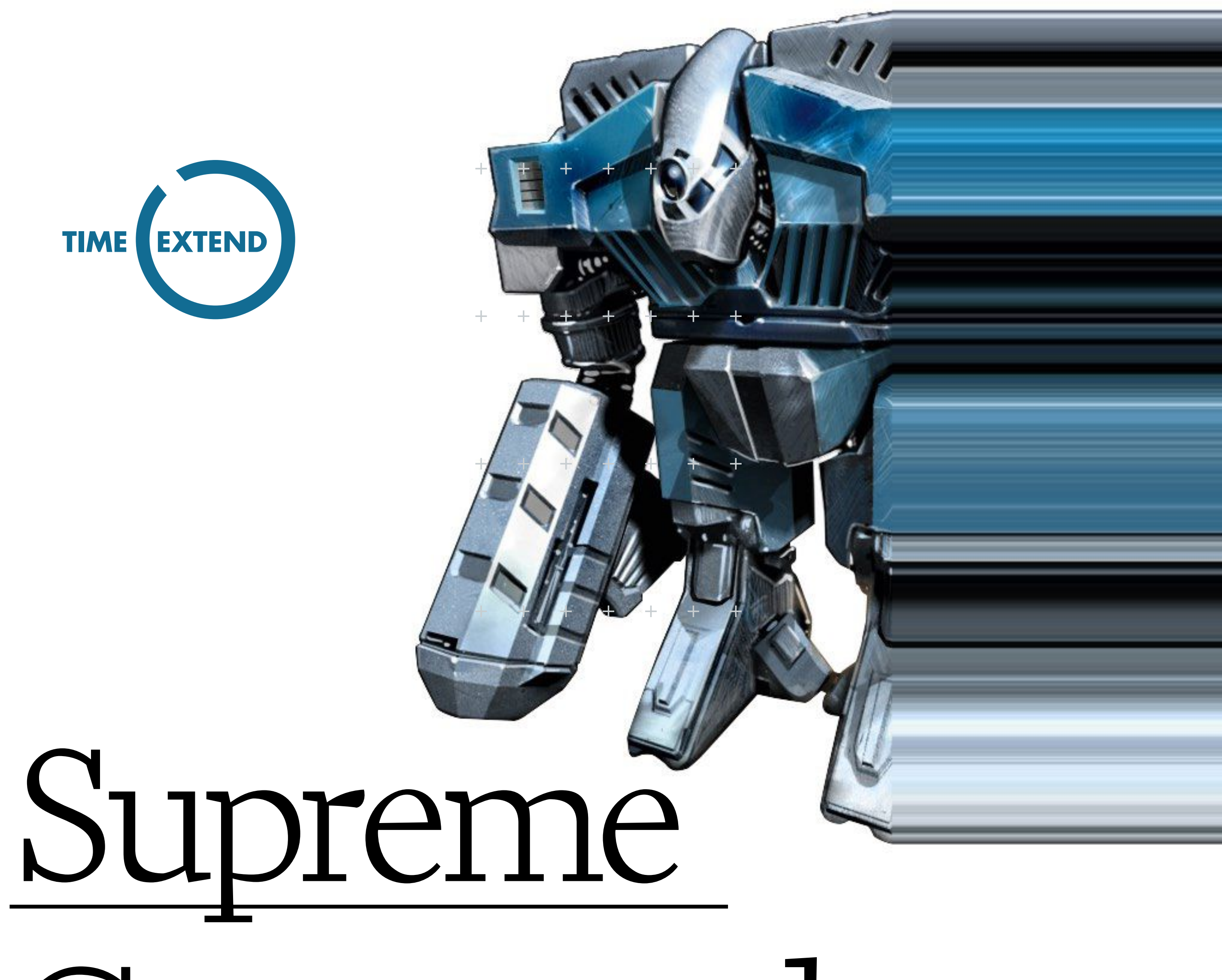
RUMBLE IN THE FUNGAL
Toad Rally mode provides an asynchronous competitive twist on levels you've unlocked in the main game. You'll pick one from a selection of opponents to race against, as you compete to earn the most coins, with your tally boosted by an audience of Toads that gathers to watch and applaud skilful play. Win, and the Toads you attract will join a Mushroom Kingdom of your own design in a rudimentary city-building aside that rewards you with new playable characters.

You can make a couple of mistakes without failing the level: Mario returns encased in a bubble, which you pop with a tap. You can use them manually, too, giving you a second shot at a pink coin you might have just missed









Supreme Commander

The RTS that challenged the genre to go big or go home

By Graham Smith

Developer Gas Powered Games **Publisher** THQ **Format** PC **Release** 2007

Picture a land covered almost entirely with glowing buildings. In the small gaps between them sit robots, which are firing lasers into the structures to boost their efficiency. Above the base hovers an enormous flying saucer called the Czar. It's firing a thick laser of its own towards the ground, but this one is destroying everything beneath it. Yet time is running out and there's a quicker way to achieve its goal. A self-destruct button is pushed. The saucer falls from the sky. What few buildings below survive the initial blast are destroyed when the Commander – a particularly tall, bipedal robot – explodes with the force of a nuclear blast. Welcome to *Supreme Commander*.

When designers approach the realtime strategy game, they all seem to ask the same question: how can we make it smaller? Let's remove the base-building, they say, or make it about a squad of only a handful of units, or better yet just about individual hero characters. Perhaps the player could just place turrets while the enemy advances along a fixed route. Or if players fight one another, then the winner can be determined by whoever has the best 'micro'.

Supreme Commander's designer, Chris Taylor, asked a different question: how can we make the realtime strategy game *bigger*? The answer begins with enormous maps and hundreds upon hundreds of robots. *SupCom*, as it's abbreviated, has three factions, each of which has its own unique set of units, and each unit comes in three flavours of power unlocked by upgrading your factories to different tiers. This stretches from simple differences – light, medium and heavy tanks, for instance – to vastly different tactical options within a single faction. You can shoot for an army made up of hundreds of tier-one assault bots coupled with some mobile shields, or an army focused around just a few tier-three Demolisher artillery weapons. You can ignore land units entirely in favour of dominating the skies. You can focus your strategy around upgrading your Commander, the sole unit you start out with, which essentially represents you on the battlefield. In the standard game mode, to lose your Commander is to lose the game, but if you want you can still upgrade him with weaponry and send him walking slowly across the bottom of oceans to reach your enemy head on.

Why does scale matter? Because it offers variety. *SupCom* is a game you can play steadily for a year and still be encountering units you've never seen before.

Considering its scope and size, it's remarkable *SupCom* remains legible. That's thanks, first and foremost, to its zoom function, which lets you smoothly transition the camera from down near the ground to high above the entire map. Reach the farthest extent of the zoom and the world turns to icons like an enlarged version of the minimap. No matter how enormous the area you're fighting over – the largest span 81 square kilometres – you can always easily and quickly see everything that's happening on the battlefield.

And there will be a *lot* happening on the battlefield. Among the aforementioned factions and tiers, *SupCom* features land, sea and air units. Some can transition between the two, such as boats that sprout legs to stomp over shorelines. You'll have to fight on all these fronts to expand across each map, setting up forward bases and capturing resource points to fund your economy. There are neat pieces of functionality to help you do so, including flying vehicles that can carry smaller units, and setting automatic pickup points to handle not only the production of units but also shipping them off to the frontlines.

Again, why does scale matter to an RTS? Because it gives you more to occupy your strategic brain. Whatever *SupCom* can't physically enlarge, it makes more complex. It's a game that expands in the mind as much as on the screen.

It's the economy that will require most of your brainpower. There are only two resources – energy for powering buildings and mass for constructing buildings and units – but where most strategy games let you start building only what you can afford in full at that particular moment, *SupCom* lets you start construction of anything at any moment. That's because your resources are measured not only as a collected pool, but also in terms of income per second. ▶



Supreme Commander's maps are so vast that they require you to set up troop-transport routes to ferry your units to the frontlines

So long as the cost-per-second of the unit during the build process is lower than what you're earning per second, you'll be able to build units even if you don't currently have enough to fund it outright. If the resource consumption is greater than your earning rate, however, then you'll run out of funds, your economy will crash, and all production will halt across your entire base.

This one small change ripples across the design of the entire game. Previously binary decisions about whether to build something become a kind of gamble, as you start production on a unit far larger than you can currently afford with the hope that your planned economic expansion can keep ahead of it. You might go even further and launch experimental units – the game's ultimate superweapons, such as the aforementioned Czar flying saucer – before they're completed. There is a chance they will fail and crumple or fall limply out of the sky before reaching your opponent, but there's also a chance you can rush them out and use them to destroy your enemy before they have a chance to get on their metallic feet.

Like most strategy games, keeping your economy fed means capturing nodes across the map and, here, placing mass extractors upon them. Unlike most strategy games, there's lots to consider about how to set up your base. Mass extractors operate faster when adjacent to power generators, for example, and faster still when adjacent to four power generators. They can also be boosted further by telling your small builder units to fire their laser at them. It's a valid strategy to begin your match by building five factories and dedicating each of them to producing nothing but the most basic worker unit, so that those units can in turn supercharge your factory's production of all future units.

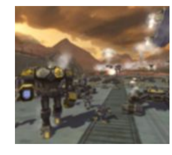
All of this would just be pleasing brain fodder were there not worthwhile opponents to fight against. *SupCom's* AI provided a challenge at release, particularly when you pit yourself against the hardest difficulty levels in the game's Skirmish modes, where it had the ability to cheat. It was also heavily flawed, however. Opponents would frequently mismanage their own economy, gathering far more resources than they were spending. This would eventually be fixed via a mod, Sorian AI, that is now the only way anyone plays the game. Developer Gas Powered Games later hired Mike Robbins, Sorian's creator, to work on future games at the studio.

THIS IS SUPCOM AT ITS BEST, SITTING AT THE VERY LIMITS OF WHAT YOUR BRAIN CAN REASONABLY KEEP TRACK OF

Sorian makes your opponents ruthlessly efficient and frighteningly responsive. Build long-range weaponry within range of a Sorian AI's base and they'll build shield domes to protect themselves. The bases they build are designed for maximum efficiency. They're wonderful to look at, like beehives made of metal and lasers, and a delight to pit yourself against, though you might want to bring a friend for help. On the highest difficulty levels of the Sorian AI



The terrain is modified by nearly every action, from craters being formed by falling robots to footsteps marking beaches



SLOPPY SECONDS

***Supreme Commander 2* was released three years after the original and is a fine game, in which you still command large armies of varied, destructive robots. But its entire scale is smaller in terms of unit and map size, and the number of units you're able to build. This decision was made partially so the game would run on the consoles of the time, something the original could never do. It also jettisons the complex economy of the original game in favour of something more traditional, including a new tech tree for managing your upgrades and building experimental units. The result is a game that's a lot less interesting and ambitious than its predecessor, but also one in which some of the same pleasures can be found in the quicker matches.**



***SupCom*'s excellence extended to its trailer, selling the game's scope in four minutes and featuring this spiderbot at its climax**

mod, they're likely too much for a single person to handle.

This is *SupCom* at its best. In skirmishes, with the AI, the hundreds of units, the size of the maps, and the complex economic model, it sits at the very limits of what your brain can reasonably keep track of at any one moment. You'll be fighting battles on multiple fronts, zooming and scanning across the map, frantically trying to keep up. One moment will be spent defending your home; the next you're establishing a new forward base. Then you're increasing power efficiency and building an experimental unit, then keeping track of your enemy's progress.

To suggest that Skirmish mode is *SupCom* at its best might imply that the singleplayer campaign mode isn't up to much. Let's make that explicit, then: the campaign is dreadful. Its early missions function as a capable tutorial for the game's concepts, but its mission design is ultimately too restrictive, in that it prevents you from building at the scale at which the game thrives, and too repetitive, in that a single mission might ask you to build a new base again and again as it advances. When coupled with a nonsense story about the war between its three factions, there's little reason to play it when you can just skip direct to the Skirmish mode and play with the game's toybox to your heart's content.

The scale meant it was easy to lose track of units. That could spell disaster, as planes like these would hopelessly attack stronger opponents



***SupCom* was** a spiritual successor to another game, *Total Annihilation*, and was followed by a standalone expansion called *Forged Alliance*. This added a fourth faction with all-new units, new units to the existing three factions, and expanded the scale even further by including orbital weaponry. With the Sorian AI mod installed, it's the best way to experience *SupCom*'s maximalism today. There was a sequel, but while *Supreme Commander* 2 is a capable strategy game, it throws away most of what made the original ambitious by shrinking the scale and simplifying the economic model.

Unfortunately, *SupCom* was not a huge commercial success. Few games have followed in its footsteps, and none have done so successfully. The studio has since been acquired by Wargaming.net and is now known as Wargaming Seattle, but it's yet to release a game of its own. It's a sad end for a company that suggested a more exciting future for the RTS than came to pass. ■





JAMES LEACH

Postcards From The Clipping Plane

Conveniently ignoring the serious side of videogame development

Like most people in game development, I can't really be bothered with real life and the people it contains. They're too random. They say things, not as a response to my actions, but just because they can. They don't even react realistically to being shot or having swords waved at them. Worst of all, they have complicated backstories which go nowhere. I refuse to waste hours fulfilling their quests, only to find that they don't have gold to give me. They are distractions that can sod off, frankly.

Against the run of play, though, it turns out one of my neighbours was a major in the Parachute Regiment. A little older than me, he defies military convention by being more than happy to chat about his life in the forces. It even turns out that he's fairly au fait with videogames, so I asked him how realistic military characters were in the games of today. His response was kinder than a man capable of snapping me in half needed to be, but he raised the interesting point that a large proportion of the younger servicemen he's worked with – sorry, "operated" with – do talk like characters from games. Not because we, the developers, have got it exactly right, but because they've played the games themselves and are copying us.

Major Neighbour told me that Chris Kyle, the American sniper upon whom that 2014 film was based – I forget what it was called – bedecked himself with the Punisher skull logo when out in the field. I didn't have the heart to mention that The Punisher was a graphic novel, not a game. Major Neighbour still has fists like uncontrolled potting sheds, after all. But he did say that nowadays fresh military recruits, especially in the US, do sometimes need to be educated out of a view of combat formed by playing games, and into the one which they'll actually face. He was sure that the last thing to leave them was the gung-ho lingo which games – and, it has to be said, our poor cousins, films – indoctrinate us with. An example he gave really resonated with me. I have referred to nine-millimetre-caliber pistols in games as "nine-mils". I must have written that dozens of times. It's an American term which I thought was universal. But apparently I'm wrong. The UK forces' unofficial shortened term is 'nine-milli', and for getting this wrong, and for helping a raft of new servicemen to get it wrong, I am a "civvy clown" who "must now get the next round of drinks in". Again, terms ringing with the clear tone of under-fire veracity, and which I shall employ on the very next combat game I work on.



Perhaps our weighty task as game developers is to put people off doing things the world would be better without

As game-making types, we are no longer playing catchup. The hundreds of hours of gameplay our players commit to sink into their psyches in a way that not even the careful destruction and rebuilding of the human offered by military offer can entirely erase. We're changing people's brains, you could argue. (I won't, simply because everyone will look at me the next time there's a gun incident in a school somewhere.)

For a while now, private flight schools in some places have counted flight-sim hours as going towards the actual training a student has completed. It's not hard to understand complicated concepts if you're immersed in accurate depictions of them on a console or computer. This is why *Kerbal Space Program* is so tough. It's pretty true to life, and its goal to weed out those who would otherwise have dreamt about the stars and bothered NASA about it with pointless application letters is presumably a great success.

To be upbeat about it, we know games are a way to leave our tedious existences and master another world in which we wield power and skill, so isn't it cool that so many of us want those worlds to be accurate depictions of ones that actually exist? It's not uncommon to meet a 13-year-old who knows all about setting up race suspension on cars. For him, a glittering career may beckon lying in a pool of oily water at a tyre-and-battery place on the outskirts of a town near you. It's a dream he might never have known was possible, and he'll be great at it. Or she. Come on now.

Perhaps it's all a disaster. Books have been inspiring people to think about and do new things for hundreds of years. And they at least have the advantage of largely being written by people who employ the term 'nine-milli', knowing that it's the correct form within these islands. Perhaps our weighty task as game developers is to put people off doing things the world would be better without. We should make banking sims, dodgy football management games, political strategy apps. And they should be accurate and horrible and nobody should ever win. Sorted. Now I'm going to play *Battlefield 1*.

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